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BARNARD'S LANDSCAPE PAINTING

THE GIFT OF
SAMUEL L. BIGELOW
PROFESSOR OF CHEMISTRY
1901 - 1937

ND
2240
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1861

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1861

William Hunter.

1879.

LEIGHTON, BROTHERS.

PLATE I.

FOREST OF FONTAINEBLEAU, JUNIPER.

THE

THEORY AND PRACTICE

OF

LANDSCAPE PAINTING

IN

WATER-COLOURS.

ILLUSTRATED BY A SERIES OF TWENTY-SIX DRAWINGS AND DIAGRAMS IN COLOURS, AND NUMEROUS WOODCUTS.

BY

GEORGE BARNARD,

PROFESSOR OF DRAWING AT RUGBY SCHOOL; AUTHOR OF "FOLIAGE AND FOREGROUND DRAWING," "SWITZERLAND," "STUDIES OF TREES," ETC.

Seventh Thousand.

LEIGHTON BROTHERS' CHROMATIC PROCESS.

LONDON

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TO

MICHAEL FARADAY, D.C.L. F.R.S.

ETC. ETC. ETC.

MY DEAR MICHAEL,

When I first undertook this Volume, your conviction that it would prove a "real and useful Work" encouraged me in its progress.

I much wished at that time to dedicate it to you, who from boyhood have been my kind friend and adviser; and I hesitated only lest it should not prove worthy of your acknowledgment.

Now that it has met with approval, and a new edition is called for, I feel encouraged to place your name on this page; and to express in this manner how sincerely we, who have the advantage of your intimate friendship, recognise and esteem the qualities of heart which endear you to us, and in comparison with which even your distinguished fame holds but a subordinate place.

Ever your affectionate Brother,

GEORGE BARNARD.

J.A.

Prof. Samuel L. Bigelow
11 F-38

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PREFACE TO THE NEW EDITION.

THE First Edition of this work being exhausted, and the demand continuing undiminished, it becomes necessary on the part of the Author to consider in what way he can render it more worthy of the success it has attained, and how far he can comply with the requests of numerous correspondents (known and unknown), who have shown their interest by writing to him on the subject. It is, however, difficult to satisfy all the demands or suggestions made for more explicit lessons or minute instructions. Were some of these ideas carried out, the whole nature and aim of the work would be changed. The Author may remind his readers, that his object was to give young Artists and Amateurs general information of the natural philosophy of colour only so far as the art required; but more particularly to explain, by the aid of carefully selected examples, the manner in which water-colour painters of the present day use their materials, and produce their effects. It was not intended that the volume should supersede the master, but rather aid him; for, in the Author's opinion, neither books, however well written, nor lectures,

however eloquently delivered and illustrated, can equal the power that an able master has in conveying instruction, with a ready brush and explanations adapted to the wants and capacity of each pupil.

But without multiplying useless plates, and thus increasing the expense of the work, the Author has found that he can comply with many of the requests for more detailed information, by adding several new plates of a more simple character. It is in these important points especially, that difficulties hard to explain by words, or understand without examples, are met with, so much depending on the way in which a water-colour drawing is commenced, and so completely are the simple washes lost or altered by the after-processes.

In this edition, the Author has replied to the questions of some of his correspondents. It has also been considerably enlarged, particularly in the Chapter on the Mode of Working; and being printed in a larger type, and with additional woodcuts, will be less difficult to understand when the student is without the advantage of a master.

To this THIRD EDITION but few additions or alterations have been required, only two or three of the plates which did not appear of much use to the pupil being withdrawn, and the whole of the work reprinted with the greatest care and attention.

8, HARRINGTON SQUARE,
HAMPSTEAD ROAD. N.W.

LANDSCAPE PAINTING

INTRODUCTION.

MANY excellent and elaborate treatises on the Theory of Colour, and several works describing the practice of landscape-painting in water-colours, are already before the public; but to understand the former requires much thought and patience; and the latter, however practical, rarely have the advantage of being accompanied by examples illustrative of the artist's meaning.

The object of the present work, therefore, is to supply that which the author, in a long course of professional teaching, has found necessary for the advancement of his pupils. The diagrams and illustrations introduced are such as have been found most useful in elucidating the theory and practice of colour in landscape-painting, and at the same time in diminishing the labour of the pupil in acquiring this valuable and attractive art.

The student, with the view of fully impressing upon his mind the rules given in the following work, should copy the illustrations; and, when he finds himself conversant with his materials, may proceed to the drawing of subjects from nature, in accordance with the rules laid down.

The work will combine a summary of the natural philosophy of colour, so far as the painter is concerned, with an extensively illustrated exposition of its practice in regard to the employment of pigments and other mate-

rials; thus serving, in the absence of the master, to refresh the memory of the pupil, and to explain remarks imperfectly understood during his lessons. It will also form an introduction to the practical study of nature.

It is in nature that colour exists in its greatest beauty; and to imitate her, and represent that beauty, is the highest aim of art. Sir Joshua Reynolds observes, that "he who recurs to nature, at every recurrence renews his strength: the rules of art he is never likely to forget—they are few and simple; but nature is refined, subtile, and infinitely various, beyond the power and retention of memory; it is necessary, therefore, to have continual recourse to her."

It should be understood that the study of colour comes last in the order of artistic education; and those who take up this important branch must have already acquired a good knowledge of linear perspective, the very foundation of drawing; and of the effects of light and shade, the chief agents in embodying form, and giving it solidity. This knowledge once attained, the attention of the pupil may be directed to colour; until his eye having been sufficiently trained to discriminate its properties with the same ease and certainty with which it determines form and arranges light and shade, he may proceed to combine all these powers in one subject.

Very erroneous ideas are entertained regarding the capability of the mind to acquire correct perceptions of colour, and to realise them in artistic effects. Too much is ascribed to genius,—too little to study and perseverance. Both the appreciation of colour and the power of expressing it are doubtless attainable by education; and, under proper direction, the laws relating to harmony of colour may be as readily understood and practised as those relating to perspective when representing forms without colour; the pursuit demanding nothing more than the general capabilities required in the study of the latter. But the student who desires to attain excellence, must devote his time and labour with that untiring energy which a love of the art alone can excite; he must be prepared to find that the greater the progress he makes, the more evident will appear his distance from perfection; and yet, each time he takes a step in advance, he will feel that he has already reaped a certain reward of his industry, and gained another motive for perseverance.

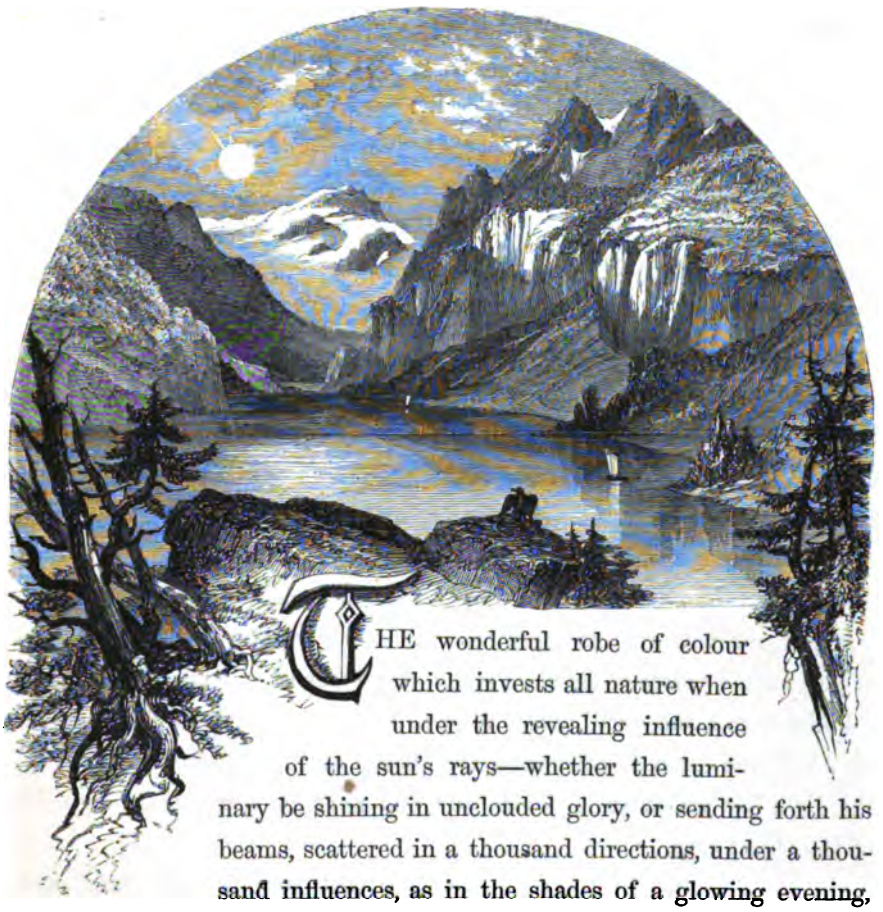
Great care has been bestowed upon the illustrations of this work; and though mechanism can scarcely be expected to equal the immediate results of the artist's own hand, yet the author trusts they will materially assist the student who refers to this volume in thoroughly understanding the system practised by the English water-colour school.

By the careful and elaborate researches of many practical men, modern artists have been spared much of the labour and loss of time experienced by the old masters in the search after proper materials for their works; and the qualities of all pigments now employed having been minutely investigated and accurately determined by Field, in his valuable work on chromatography, to that work the student is referred for a more extended view of their nature.

CHAPTER I.

ON THE NATURE OF COLOUR.

SECTION I.—THE PRISMATIC COLOURS.



THE wonderful robe of colour which invests all nature when under the revealing influence of the sun's rays—whether the luminary be shining in unclouded glory, or sending forth his beams, scattered in a thousand directions, under a thousand influences, as in the shades of a glowing evening, or be chastened down to the graver tints, consisting of little more than light and shadow—is an object of the highest admiration to all, but more especially to the artist. The ever-varying circumstances only increase his admiration, and add to his delight; and when, by careful observation and

much study, he has attained the power of imitating the *forms* presented to his eye, and of representing the proportion of light and shadow on the different parts, he then aims at the triumph of his art, and endeavours to clothe them in their natural colours. Great difficulties, however, present themselves to him who desires to obtain this high object; not merely in the want of sufficient skill or mental appreciation, while he is rather an aspirant to than a master of his art, but in the very condition of the case itself, where a white surface and a few pigments are given as the only means of representing the infinitely varied and changing lights and colours of nature. It is indeed surprising to see, in the works of the great masters of painting, how far the mind of man has been able to overcome difficulties, and to succeed in producing representations which sometimes charm almost as much as nature herself.

Being desirous of producing a useful and practical work, which shall aid those who are attempting to gain the power of representing natural scenes by means of water-colour drawing, I have thought that a short preliminary consideration of the physical character of *colour*, and of the *light* which renders it visible, might be of some service, inasmuch as it would supply, in numerous cases, the principles which should guide the artist in his work, and the details of the expedients by which he should endeavour to attain his object. Further, it will at one time answer such thoughts and queries as must arise in the intelligent mind of any one pursuing his vocation with earnest devotion, and at another may suggest considerations which, being wrought out, will aid his resources; for the more the mind dwells upon the correlated points of its chief study, the better will it be able to pursue that study to a successful end. We will therefore consider briefly, and only so far as the artist is concerned, the theory of colour: first, in respect to the light by which it is developed; and next in relation to the colour of the object seen.

If the shutters of a room be closed, so that no light can enter except through a horizontal and narrow opening on the side facing the sun, a ray from that luminary passing through the aperture will fall upon the floor; but if a triangular prism of glass be held near the opening in the course of the ray, in the position shown by the figure, the ray will be bent from its

first course, and take another direction, which will probably either cast the light farther along the floor or upon the wall of the room. A sheet of white card-board or drawing-paper being then placed to receive this ray, some very interesting and important effects may be observed. In the first place, the original narrow band of white light on the floor becomes on the wall a succession of bands of the most varied and brilliant colours. These, though they pass insensibly into each other, may be considered as an infinite number of lines of coloured light, arranged one after the other, but all parallel to the original white band. This is called the spectrum, and an attempt is made in Fig. 2 to convey an idea of this object; yet, although the greatest pains have been taken with the delineation, the result falls infinitely short in beauty of that presented by the experiment. There it is seen (as Newton taught us) that the white light of the sun can be separated into coloured rays; and, what is more remarkable, these different rays can, by being recombined, again form white light; for if a lens be held in any part of their course, so as to include them all, and a sheet of white paper be held beyond the lens at its focus, these coloured rays will be found to reproduce white light. If the paper be taken away, or removed farther off, the white light will again be resolved into the various coloured rays. By this experiment it is proved that the white light of the sun contains in it all these coloured rays, and that they are all again required to make up the original white light.

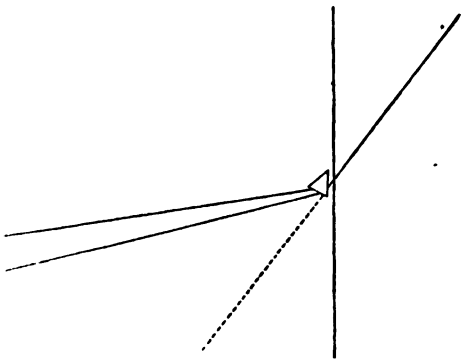


Fig. 1.

These rays are invariable in their tints, places, and proportions. Beginning with those which are the least bent out of their original course, Newton describes them as being—red (9), orange (5), yellow (9·2), green (11·3), blue (11·4), indigo (8), violet (16·1); and the extent which they occupy in the spectrum very nearly agrees with the numbers here attached to their names. But they are by no means of equal illuminating power;

the yellow and green being, for instance, far more luminous than the blue or violet. The breadth of the spectrum is determined by the length of the opening in the shutter; and its length, taken across the colours, chiefly by the distance from the aperture at which the white paper is placed.

It will at once be perceived that, in this experiment, the colours rendered visible do not originate in the object looked at, but in the light which falls on it; the paper is white, and not one of the tints now proceeding from it are, under ordinary circumstances, presented to the view. In common language, the colour may be said to be in the light; and when the light is once separated into its different coloured rays, then it is found that these rays essentially differ from each other; for no farther refraction or treatment of any one of them, when so separated by passing through a hole in a screen, can change it into any of the other rays, or alter it in any manner: that is to say, though we may absorb and destroy it, we can neither vary its colours or change its character. It is quite true that we may combine these rays, and thereby produce different effects: thus we can, by artificial arrangements, throw the blue and the yellow rays on the same spot, and then a green colour is seen; or we may, as has been described, combine all the seven, and thus reproduce white light. But the resulting white may be opened out again, or the compound green resolved into its blue and yellow; yet the original green of the spectrum cannot be separated into blue and yellow constituents, nor can any one of the rays in the spectrum, when perfectly separated from the others, be in any degree subject to change in its colour. They are all true primitive colours.

It has already been said, that the colours obtained by the experiment are dependent more upon the rays coming from the source of light, than upon the body looked at; it may likewise be remarked, that no object or pigment can present any colour to the eye, except such rays exist in the light illuminating it as are competent to produce that colour: the rays may for a time be mingled with others, but they *must be there*, or no colour will be seen. With spirits of wine and salt we can prepare a light producing little more than yellow rays; then, if by such a light we look at a purely red body (as, for instance, a piece of red morocco, or a bright

cherry lip), we see it without colour—that is, black: again, if by the same light we look at a substance not purely red, as vermilion, or red sealing-wax, we see it yellow; for the power of the coloured ray governs the power of the colour seen by it, and the latter therefore shows yellow only.

When we say that a ray is coloured, we are obliged to submit to the imperfection of language. A ray is not in fact coloured, nor can any colour be seen in it, from its origin to its termination, except by means of the motes, or vapours, which are in its path; indeed, strictly speaking, no substance can be said to be of any colour; for it wants the action of light, and of the particular light requisite to produce the specific colour, before such colour can appear. That which is recognised as colour by the eye, is the united effect of the substance looked at, and of the ray falling on its surface. Having made the above reservation, the author does not hesitate to use common phraseology, deeming it sufficient for the present purpose.

It may be as well to describe another way of observing the spectrum, as it will enable the artist, if so inclined, to examine the colour characteristics of the pigments which he employs. Let him place a sheet of black paper without gloss, or a piece of black velvet, on the floor, in good daylight, and on the middle of it a slip of white paper, or card-board, about an inch and an half long, and one-third of an inch wide: then, receding about ten feet, let him hold a prism of glass similar to that before mentioned, in the position delineated in Fig. 2. Upon looking on the ground near his feet, he will see the black background, and on it the strip of white paper converted into a spectrum; *i.e.* the white light, passing from the white object into the prism, will there be separated into the different coloured rays, and these will enter the eye arranged as in the spectrum, and produce the effect desired. A partial spectrum of the same kind is often seen produced by lustre drops, decanter stoppers, and other forms of cut-glass, and is most beautifully developed by a series of reflections and refractions in those drops of rain which produce the rainbow.

Fig. 2.

In modern times many exceedingly minute investigations of the spectrum have been undertaken by Wollaston, Frauenhofer, Herschel, Brewster, and others, and results of the highest interest have been obtained; but, though they are intimately connected with colour, they are by no means essential to a work of this description, which is limited to the wants of the artist.

Turning to the second part of our explanation of physical effects, we will briefly notice those points relating to the nature of the object receiving the luminous ray; and which, being made visible by it, appears clothed with colour—according as its nature affects and changes the ray of light. This object, or collection of objects, constitutes the picture viewed by the artist, and of which he endeavours to give a faithful representation. We will analyse it chromatically and briefly. Objects are rendered visible by the light, which, first falling upon them from the sun or other luminary, is by them reflected, and thus they become secondary sources of light. Suppose a white surface, as of card-board, plaster of Paris, &c.; it can send back all the various coloured rays falling on it from the sun; these rays are seen in the spectrum, in which they are shown in their separated state (*vide* Fig. 2). Taking the ordinary case of the unseparated rays, the card-board reflects all the various coloured rays as before, but mingled, and the effect on the eye is white. That *all the coloured rays* proceed from the card-board is proved by the effect described in the second mode of viewing the spectrum, namely, by looking through the prism at a piece of white paper on a black ground. But though all the kinds of rays are reflected far more or less of each ray is extinguished and destroyed as to any power of producing further illumination or colour; and the rest, or that which still remains radiant, is thrown about in all directions.

If less light fall on the white surface, its apparent whiteness will be diminished, because less light is reflected from it; diminish the light still more, it becomes gray; and with no light incident upon its surface, it appears black, for it sends no rays to the eye. To illustrate this in another manner; suppose the illuminated surface to be that of a mixture of plaster of Paris and powdered charcoal; then, though the illuminating power be ever so strong, the surface will appear gray; much more of the incident

THE PRISMATIC SPECTRUM.

LEIGHTON BROTHERS

light being there extinguished, and consequently much less reflected to the eye than before. If the surface be that of charcoal alone, then nearly all the incident light is extinguished, and we have, as before, black. But, in all these cases of extinction of light by the object, all the various rays have been dealt with at once; and, while any light remained to be reflected from its surface, however deep the gray it may have presented, still such gray has contained rays of all the colours, and these in due proportions for forming white. Even a surface of the purest white that we can prepare, quenches a considerable proportion of the light falling upon it; and hence arises much of the artist's difficulty; for there being nothing but this imperfectly white surface with which to represent light, his representations of it must fall infinitely short of the reality; and yet, as regards his trees, buildings, and other objects, his pigments are as bright in colour as the objects themselves; consequently, should he either endeavour to represent a day or night scene, having the sun or moon as the only source of light visible in the picture, or should he wish to introduce strong reflections, as of the sun on the ripples of a lake, or desire to depict a rainbow, his most finished production must become but a feeble imitation of the brilliancy of nature.

This brings us to the consideration of those surfaces which, quenching some of the rays of light, do not quench equal proportions of all the coloured rays. Here we have the origin of the general colours of material objects, and the representative pigments of the artist. These objects are not distinguishable, as regards colour, by other senses than the sight, or by other means than the rays of light. In the absence of light, green or red objects are not distinguishable in colour from white: brought into the light they are not white, because they do not reflect all the light which falls upon them; and they are not gray, because the portion of light which they extinguish is not an equal proportion of each coloured ray. The green body has absorbed more of the other rays than of the green, and hence, sends the latter back to the eye in excess, producing a green effect on the perceptive organ; and the red body, having destroyed more of the green and other rays, sends back the red rays in excess, and hence its colour. It is as though a partial analysis of the white light had been made by the different

coloured bodies, one sending off the green and another the red ray, in a manner something analogous to that in which the prism sends off all the rays.

There are very few pigments, or even natural objects, that are pure in colour. Most of them reflect variously coloured rays. Yellow pigments, for instance, reflect also red and green rays, as the artist will find, if, instead of the white strip of card-board, he place on the black paper or velvet a cake of his purest yellow, and look at it through the prism as before. And this explains a point which might otherwise present some difficulty, since no substance can manifest its colour to the eye, unless the rays falling upon it be of the proper character: our colours, even those called primitive, are not pure; so that if a green or red light fall upon a yellow body, instead of yellow it may appear either green or red, because it can reflect, more or less, all the three colours; for every ray, not absorbed and destroyed by the body on which it falls, is sent back in the resulting ray to the eye, to produce that final effect of which we are made conscious by our visual organs.

There are both opaque and transparent colours. An opaque colour is that which, having absorbed some of the coloured rays from the white light, sends the rest back from its surface to the eye, at the same time permitting none to pass through; a transparent colour is that which, having absorbed some of the said coloured rays, allows the remainder to pass through. Consequently, on looking at a well-illuminated surface of an opaque red, we at once see it as a red substance; but if we replace it by a plate of red glass, we do not see that red until a sheet of white or red paper, being placed beyond it, throws back the light, which finally has passed twice through the glass. These transparent colours, like the others, are only partial in their action on the rays; and though they may transmit one colour more easily than another, and so possess a particular tint, yet scarcely one is known to transmit a ray of a pure and unresolvable colour.

When opaque colours are mixed together, to produce an intermediate effect, their action is not the addition of light to light, as when two rays fall upon the same place: on the contrary, they obscure each other; for if blue be added to yellow, to form a green, so much as the blue displays

itself, in the same proportion it hides and darkens the yellow; and the yellow, in like manner, hides the blue. It is well known by experience that a considerable degradation or dullness of colour arises in this way; an effect against which the artist should carefully guard, avoiding it as much as possible. When placing a transparent colour over an opaque one, the physical effect is different in kind: for then the light, not being altogether cut off by the colour above, is reflected by the colour beneath,—deprived, however, of those rays which the transparent colour cannot send back to the eye. Thus if an opaque yellow surface be covered with a transparent blue, the light, before it reaches the yellow, is deprived of some portion of its red and orange rays, and again of another portion on its return from the yellow; and hence a beam competent to produce a green effect on the eye is the result. These physical principles have great influence on the practice of the artist, when, according to what his experience has taught him, he selects opaque or transparent pigments either to give body or to subdue his colours; and though it is not, in this place, necessary to enter more minutely into such matters, yet there can be no doubt that the artist who, being equal in other respects to his contemporaries, surpasses them in his knowledge of these principles, will not only possess a greater advantage in the use of his agents, but will, in the exercise of his talents, enjoy an additional and even a higher pleasure.

A water-colour drawing is the effect of very fine, opaque coloured particles, mingled with and sometimes overlaid by transparent colours; which, being disposed upon a white ground, so modify the light falling upon and being reflected from that white surface, as to produce the effect constituting the picture. In respect of by far the largest part of the picture, the mind should be intent upon this idea, namely, of the light which is thrown back by the paper to the eye; and it should be as little injured in its character of brightness as possible by the means taken to represent the forms and colours of natural objects. Light and shadow *must be there;* but there are such things as clear shadows and dirty lights.

With regard to the pigments employed in the production of such drawings, we have by no means a free choice, but are limited to the use of those natural or artificial bodies, which, besides being powerful in their

production of colour, may be mixed, more or less, with each other, without being subject to much alteration or decay, and also with water or gum, without mutual chemical action or injury; and, whether soluble or insoluble, may be applied with a brush. Hence one of the reasons why pigments do not enable us to realise all the effects of nature:—we are restricted by the very qualities of the substances we use.

Passing on to the practical part of our subject, we will now describe the most important of these pigments, noting the circumstances and modes of application which enable us to use them most effectually in our endeavours to obtain truthful representations of the natural pictures presented to our view.

SECTION II.—ON THE PRIMITIVE COLOURS, AND THEIR COMPOUNDS.

WE have already shown that the prismatic spectrum, described by Sir Isaac Newton, consists of seven colours. As these colours admit of no further separation or change by means of refraction, they may each be considered as primitive. But, notwithstanding this condition of the colours of the spectrum, artists, and those who write on art, have agreed to designate only three of them as primitive, namely, red, yellow, and blue, because, with the pigments representing these, they can, so far as the materials will allow, form all the others. Thus red and yellow mingled make orange; yellow and blue, green; and red and blue, purple. But red, yellow, or blue cannot be obtained by any mixture of the other colours; hence they may be considered, in an artistic sense, as strictly primitive.

To these three primary colours may be added white and black: white, as the representative of pure daylight in its undivided state; and black as that of darkness, or the absence of light. The three primaries may be regarded as gradual transitions from one extreme to the other, both in colour and luminosity; thus we may pass from white, or positive light, to yellow, the colour most nearly allied to it; thence to red, the mean and most important colour; then to blue, the representative of space and coldness; and finally to the neutral black. The union of all the prismatic

colours, in their proper proportions, produces light or white; but the same combination, and the union of the three material pigments best representing them, gives a gray or black. We have previously demonstrated, that the grayness or blackness of a substance arises from the smallness of the quantity of white light reflected from its surface.

One black substance may appear comparatively white, when contrasted with another of a still deeper shade. Thus a piece of black velvet, placed in the sunshine, will appear black; but if we throw a strong shadow across it, the unshadowed portion will appear white or gray, and only the shadow by comparison black. In speaking of white and black, considered by artists as neutral (or the positive and negative extremes of colour), we must remember that the true grays being neutrals are intermediate, forming a link between the two extremes of white and black, as we have already illustrated in the section on the prismatic spectrum.

Adopting, therefore, the artistic division of colours into three primaries, our simplest course will be to give a brief description of their position and qualities in the order they present themselves in the spectrum. We can afterwards arrange them as we please in our experiments. The red rays being the least bent out of their course appear at the end of the spectrum nearest the place on which the undivided light would fall; therefore of the three primaries we shall commence with

RED.

This, the most powerful and distinct colour of the three, excites and stimulates the eye, predominating in all colours which artists call warm. It occupies a mean or middle position in the scale of colour; for yellow approaches nearer to light, and blue to darkness, while both tend to produce a coolness of effect, as compared with red. Green is its accidental or complementary colour.

YELLOW.

Yellow in an artistic view is the primary most closely allied to un-

decomposed light, by the diffusing influence of which it is frequently mingled with all the other hues. Its accidental colour is purple, so that a yellow sunset will admit of a purple distance; but should the yellow approach a golden or orange hue, blue may prevail in the sky and distance. Notwithstanding this arrangement accords with the principles of accidental contrasts, it would appear that yellow in nature is more generally contrasted with black than with purple, and that these contrasts have been employed with success by Rubens and Turner. Yellow as a pigment is not easily met with in a perfectly pure state, being generally combined with red in various proportions. This addition increases its warmth, and renders it more agreeable to the eye, without altering its characteristics; so that many such compounds are still called yellow. Any admixture with blue at once changes its character from that of a colour nearly allied to light, to one more closely associated with darkness.

BLUE.

Blue, being related to shade or darkness, is consequently retiring in its character, imparting the same quality to all the hues in which it predominates. It is rarely seen pure in landscape; but in the heavens we find abundant compensation for its paucity on earth. Considering, then, these three colours alone requisite for our present purpose, suppose we arrange on a white ground respectively (as represented in Plate 3), three pieces of red, blue, and yellow glass of the same intensity of colour. Flat glass vessels, filled with coloured fluids, will produce the same effect; and where the primary coloured pieces cross each other three compound colours will be

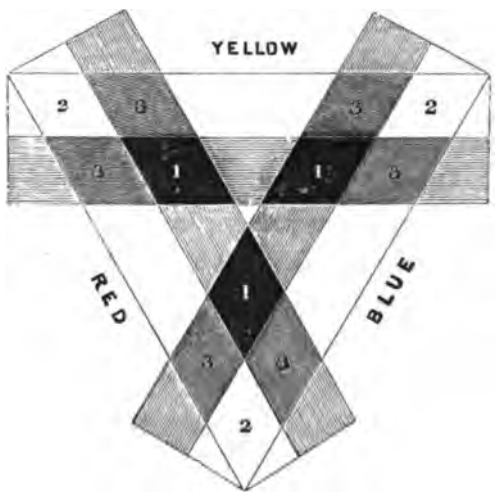


Fig. 3.

produced, called by artists secondary colours; thus yellow and red will make orange; yellow and blue, green; and red and blue, purple. If each strip of glass had consisted of two bands of the same colour, one darker than the other, and been arranged with their darker edges towards the centre, as in the accompanying diagram, the secondaries would have been formed in different proportions as compared with the primaries. At 1, 1, 1, the deepest colours are produced by the union of the greater intensities of the red, yellow, and blue; at 2, 2, 2, the intensities are equal, but of the least degree; while at 3, 3, 3, where a dark band passes over a light one, the quantity of one primary colour in each diamond is exactly double that of the other. Hence arises a fertile source of secondary colours, the qualities of which will require a brief description.

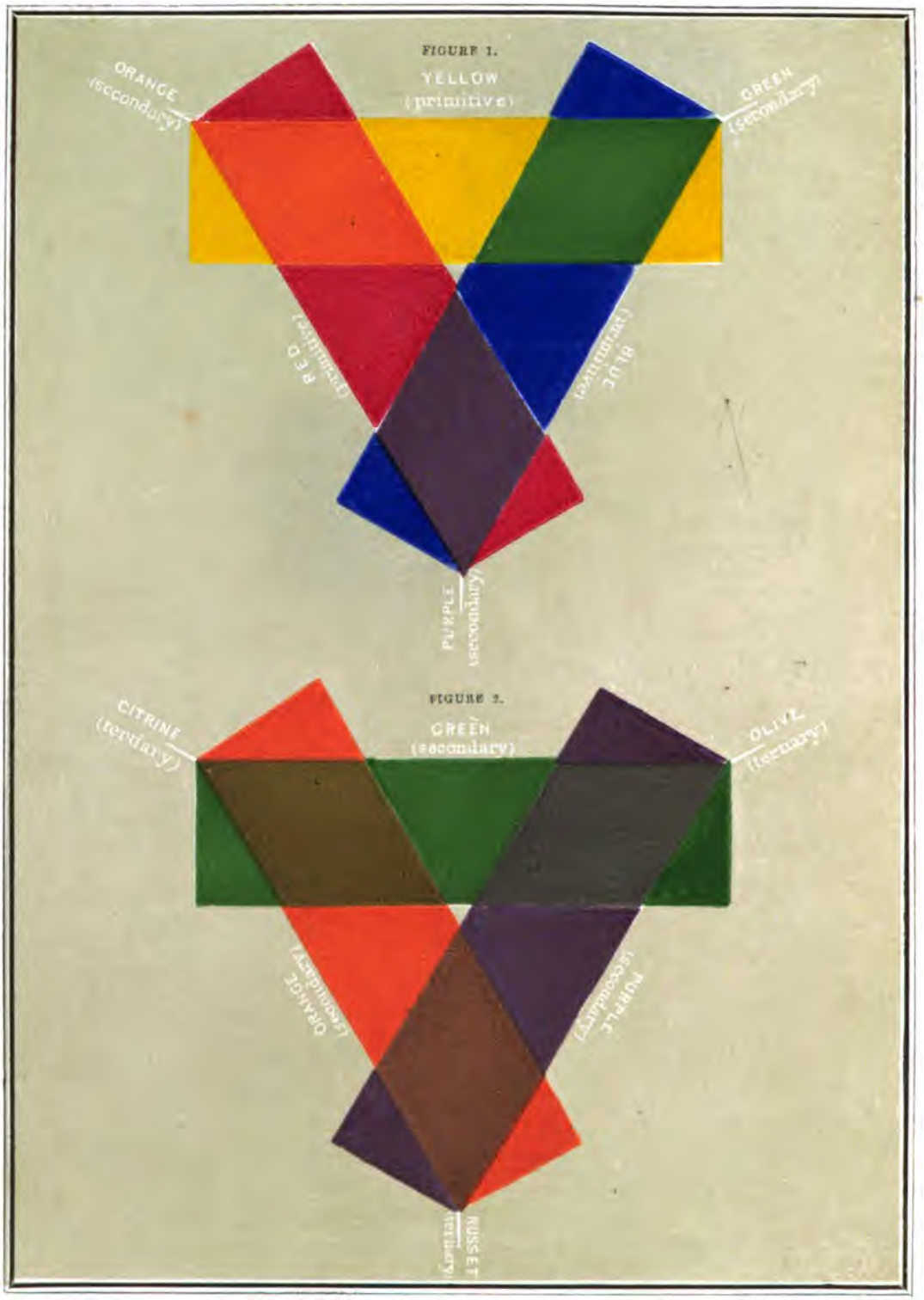
ORANGE (YELLOW AND RED).

Orange, being the most luminous, is, on that account, the most striking and prominent of the secondaries. It is the connecting link, or harmonising colour, between yellow and red, and the accidental or complementary colour of blue. It has a great variety of tones; but these cannot be represented in a diagram, owing to the difficulty of printing such delicate variations, and the limited power of machinery as compared with the artist's hand.

GREEN (YELLOW AND BLUE).

Green is generally considered as the mean between the other two secondary colours, taking an intermediate position between light and shade. It is remarkably distinct and striking in its effects on the eye, being at the same time highly refreshing and soothing to that organ; it is far more prevalent in nature than any other colour, though seldom seen in its pure and unmixed state. The green of nature accords well with blue, being harmonised therewith by the warm purple and gray tones of the atmosphere and distance. Nevertheless it is very doubtful whether a picture, having a preponderance of green, is ever truly popular, or even pleasing to the eye, however true to nature.

PRIMARY, SECONDARY, AND TERTIARY COLOURS.



LEIGHTON, BROTHERS.

PURPLE (RED AND BLUE).

Purple is the coolest and darkest of the secondary colours. It possesses, in a high degree, the modest retiring qualities of the primary blue, with which it is most closely connected; and as the eye delights to dwell on those colours which least fatigue it, perhaps purple may rank next to green in the pleasure it affords. The varied purples, or warm grays, as the artists term them, are of the greatest use to the landscape-painter, in harmonising the aerial blue of the sky and distance with the richer tone of the foreground.

To these six, *i. e.* the three primaries and the three secondaries, may be applied the name of colours; because with indigo (which artists scarcely consider as a distinct colour, owing to its near approach to blue) they form the seven prismatic colours of the spectrum.

THE TERTIARY COLOURS, OR PRIMARY HUES.

The tertiary compounds are hues composed of all the primary colours, one of those colours, however, predominating. Repeating the previous experiment, substituting glasses of the three secondary colours, we obtain the primary hues, as seen in Plate 3, fig. 2. The latter will evidently produce a much less striking effect on the uneducated eye than the former; and this doubtless led Field to remark, that "to understand and relish the harmonious relations and expressive powers of the tertiary colours requires a cultivation of perception and a refinement of taste, to which study and practice are requisite. They are at once less definite and less generally evident, but more delightful, more frequent in nature, and rarer in common art, than the like relations of the secondaries and primaries."

They form by far the greatest portion of every landscape, modulating and harmonising every scene. The attainment, therefore, of a just appreciation of their beauties and infinite variations should be the constant study of the artist. He who considers them as beneath his notice, or treats them only as so many "dirty tints," as Barry calls them, can scarcely be aware of the rapid degradation which takes place in all colouring so conducted.

As well might the musician consider playful and beautiful variations in music as of no importance; whereas they serve to relieve, refresh, and at the same time to sustain the attention, and enable it to return with renewed interest to the simple melody or theme of the composition.

Howard, in one of his lectures, says: "Colour of different degrees of purity is scattered throughout all nature, cheering and delighting mankind with a perpetual display of splendour and magnificence. This bountiful provision of nature has the power of imparting a charm to things the most trivial and otherwise unattractive, and thus furnishes the painter with ready and inexhaustible resources for the embellishment of his subject, of what kind soever it may be."

Nature presents few of the primary colours to the landscape-painter for his imitation; such objects as birds, minerals, and even flowers, though making the nearest approach to the primitive colours, are yet seen in portions too small to have much effect on his picture. The artist may occasionally give a dominant tone to his composition by a small portion of blue in the sky, or of red in the dress of a figure; but in nature the colours are so blended, harmonised and diffused by atmospheric action, that to neglect the tertiary degrees of the chromatic scale would either produce discord, from want of a proper arrangement of colours, or monotony from their deficiency of contrast.

Harmony in landscape depends more on the distinctly marked character of these delicate hues than on the relative proportions or quantities of the primary colours. In using them the greatest care is required in their selection, and the greatest skill in their manipulation; the difficulty of adjusting all their minute variations being much increased by the necessity for constant and simultaneous attention to the effects that light and shade have upon these tints. The greatest masters have found ample scope for the exercise of their genius and industry in their delineations of the beauties of natural scenes, which, though depending essentially upon these tertiary hues, and being constantly presented to our view, still never cease to call forth the highest admiration of every lover of nature. That they may be viewed under different aspects, and treated with different effects, and still be ever charming, is proved by the productions of the most

celebrated artists. Whether, like Turner, they revel in light, air, mist, and sunshine, and with perceptive delicacy aim at expressing the realms of space; or whether, after Ostade and Teniers, they repose on the quiet neutral grays; or, following in the steps of Rembrandt, they pass from colours into the depths of shade,—one and all, adhering as they ought to the truthfulness of nature, may equally command success.

Having thus called the attention of the student of landscape-painting to the importance of the tertiary colours, or primary hues, we will proceed to their description.

CITRINE (ORANGE AND GREEN).

A mixture of orange and green is called citrine, or citron, from its likeness to the colour of that fruit; it is a dark, subdued, yellowish green, and tolerably well represented by the pigment called *brown pink*. It is more nearly allied to yellow than to blue or red, being composed of yellow and red, and yellow and blue. This colour is pleasant and cheerful, and, owing to the predominance of yellow in its composition, approaches more nearly to light than the other two primary hues. Thus it permits the painter to modify the greens of the landscape; and by giving them, in some degree, the orange and autumnal tints, he can at once increase the quantity or breadth of light, and add warmth to the general effect. Citrine harmonises well with the deep purple tones which, at the decline of day, prevail in the middle distance.

RUSSET (ORANGE AND PURPLE).

The second primary hue is russet, in which red predominates. It will be seen by Plate 3, fig. 2, to be a mixture of orange and purple, or of red and yellow, with red and blue. As red occurs twice in its composition, russet inclines more to red than the other primaries. Sometimes it appears among pigments in a subdued form under the name of red; thus Indian red is a tolerably good russet. Brown madder is a deep transparent russet, which harmonises well with deep greens; it is a very useful colour

for the first harmonising tones of a water-colour drawing, since it mixes well with a broken or subdued yellow, and when thus varied may be passed over the whole paper.

In union with the blues it supplies a gray, which forms an excellent link in connecting light and shade with colour. Russet has a more retiring quality than brown. Having a portion of blue in its composition it partakes of the aerial hue, and is therefore often used to represent some of the more decided browns which occur in the shade or middle distance.

OLIVE (PURPLE AND GREEN).

Olive, formed by purple and green, is the last of the tertiary colours, and is more nearly connected with blue than the two former; it therefore makes the nearest approach to shade and darkness. It contrasts well with a deep-toned orange, and is the most retiring of all the colours. Appearing continually in the representations of slates and grays on rocks, and in the deep shadows on water, it is of great importance in the landscape. Caution must be observed in its use, as it has a tendency to detract too much from the light of the picture.

SECTION III.

ON THE HARMONY AND NATURAL CONTRASTS OF COLOURS.

THE study of CHROMATICS, or the relations which different colours bear to each other, forms an essential part of the education of every student in the art of colouring. It enables him to appreciate the numberless variations which he may make with his pigments, and teaches him to heighten and develop colours by the repeated application of tints and hues harmonising with each other. By its aid, too, he may sometimes obtain a happy effect in the judicious use of those contrasts and apparent oppositions of colour which experience has proved to be productive of the most agreeable results.

Although the science of optics of late years has made great advances, it is not yet possible to deduce from it any certain rules to determine the relative proportions which colours in juxtaposition must bear to each other, in order to produce perfect harmony. A knowledge of these proportions can only be acquired by the cultivation of the artist's taste, and probably varies with the peculiar quality of the perceptive faculties of each individual. We may, however, by a brief examination of facts relating to the theory of colour, already determined by the science of optics, arrive at those principles which form the basis of a sound artistic education.

The spectrum has not been placed before the student to prove that the proportions therein exhibited by its different colours are those to be employed in good and harmonious colouring; nor is it even necessary that colours should follow the same order to produce agreeable contrasts. The colours of some of the most celebrated pictures have been arranged in very different positions and proportions. There are, indeed, pictures forming admirable examples of harmonious colouring, which scarcely contain any

positive colour throughout their whole composition. To recur at once to the highest authority—nature, how often are we lost in wonder and admiration at the solemn effect of an assemblage of almost neutral hues and tones in an autumnal twilight or a wintry storm! To imagine the necessity of a strict adherence to any such order of proportion and contrasts, would be as absurd as to suppose the finest effects of music to depend on the constant succession of the most perfect chords. No—the spectrum has merely been introduced in order that we may trace all colour to its original source—light; and that, by observing the influence which light, in all its modifications, exercises upon colour, we may arrive at facts affording us a sure foundation on which to establish rules for the judicious application of the pigments representing those colours.

The various bodies most nearly representing the prismatic colours must first be carefully examined, both separately and in combination, and also under the influence of different lights; so that we may be aware of their effects upon our vision, become master of their properties, and observe those affinities or contrasts which are most agreeable or disagreeable to our perceptive organs.

Such inquiries, in a work devoted like the present more to practice than theory, must necessarily be short and concise. They may, however, serve to indicate the course of study which every one, pursuing the art with earnestness, must undertake; and also to encourage the student to examine nature for himself, that he may understand and appreciate the beautiful results of the simple laws by which her operations are governed.

The experiments in regard to the effects produced on the visual organs by coloured light of great intensity, and the tendency of each particular colour to excite the perception of a certain other colour in all whose sight is in a healthy state, are so clearly detailed by Sir David Brewster in his work on Optics, and are so important, that we quote them here at length:—

"When the eye has been strongly impressed with any particular species of coloured light, and when in this state it looks at a sheet of white paper, the paper does not appear to it white, or of the colour with which the eye was impressed, but of a different colour, which is said to be the *accidental colour* of the colour with which the eye was impressed. If we place, for

example, a bright *red wafer* upon a sheet of white paper, and fix the eye steadily upon a mark in the centre of it; then, if we turn the eye upon the white paper, we shall see a circular spot of *bluish-green* light of the same size as the wafer. This colour, which is called the accidental colour of *red*, will gradually fade away. The *bluish-green* image of the wafer is called an *ocular spectrum*, because it is impressed on the eye, and may be carried about with it for a short time.

"If we make the preceding experiment with differently coloured wafers, we shall obtain *ocular spectra*, whose colours vary with the colour of the wafer employed, as in the following table;

Colour of the Wafer.	Accidental Colour, or Colour of the Ocular Spectra.	Colour of the Wafer.	Accidental Colour, or Colour of the Ocular Spectra.
RED	BLUISH GREEN.	INDIGO	ORANGE YELLOW.
ORANGE	BLUE.	VIOLET	YELLOW GREEN.
YELLOW	INDIGO.	BLACK	WHITE.
GREEN	VIOLET REDDISH.	WHITE	BLACK.
BLUE	ORANGE RED.		

"In order to find the accidental colour of any colour in the spectrum, take half the length of the spectrum in a pair of compasses, and setting one foot in the colour whose accidental colour is required, the other will fall upon the accidental colour. Hence the law of accidental colours derived from observation may be thus stated:—The accidental colour of any colour, in a prismatic spectrum, is that colour which in the same spectrum is distant from the first colour half the length of the spectrum; or, if we arrange all the colours of any prismatic spectrum in a circle, in their due proportions, the accidental colour of any particular colour will be the colour exactly opposite that particular colour. Hence the two colours have been called *opposite* colours.*

"If the primitive colour, or that which impresses the eye, is reduced to the same degree of intensity as the accidental colour, we shall find that the one is the complement of the other, or what the other wants to make it white light; that is, the primitive and the accidental colours will, when

* It has been already observed, that the proportion of the colours in the spectrum varies, even by the same kind of light, when prisms are used of different refracting substances. To verify the above experiments, it will be necessary to use a prism of flint-glass.

reduced to the same degree of intensity which they have in the spectrum, and when mixed together, make white light. On this account accidental colours have been called *complementary colours.*

"With the aid of these facts, the theory of accidental colours will be readily understood. When the eye has been for some time fixed on the *red* wafer, the part of the retina occupied by the red image is strongly excited, or, as it were, deadened by its continued action. The sensibility to red light, will therefore be diminished, and, consequently, when the eye is turned from the *red* wafer to the white paper, the deadened portion of the retina will be insensible to the red rays which form part of the white light from the paper, and consequently will see the paper of that colour which arises from all the rays in the white light of the paper but the red; that is, of *bluish-green* colour, which is therefore the true complementary colour of the *red* wafer. When a *black* wafer is placed on a white ground, the circular portion of the retina on which the black image falls, in place of being deadened, is protected, as it were, by the absence of light, while all the surrounding parts of the retina, being excited by the white light of the paper, will be deadened by its continued action. Hence when the eye is directed to the white paper, it will see a white circle correspond to the black image on the retina; so that the accidental colour of black is white."

Sir David Brewster afterwards details some curious experiments, in which both the primitive colour and its accidental one are seen at the same time.

Thus, if a body be illuminated by a red light and a white light of equal intensity, one of its shadows will appear red and the other green. In these cases, he says:—

"The accidental colour is seen by a portion of the retina which is not affected, or deadened, as it were, by the primitive colour. A new theory of accidental colours is therefore requisite to embrace this class of facts.

"As in acoustics, where every fundamental sound is actually accompanied with its harmonic sound, so, in the impressions of light, the sensation of one colour is accompanied by a weaker sensation of its accidental or harmonic colour. When we look at the *red* wafer, we are, at the same time, with the same portion of the retina, seeing *green;* but being much

fainter, it seems only to dilute the red, and make it, as it were, white, by the combination of the two sensations. When the eye looks from the wafer to the white paper, the permanent sensation of the accidental colour remains, and we see a green image. The duration of the primitive impression is only a fraction of a second, as we have already shown; but the duration of the harmonic impression continues for a time proportional to the strength of the impression. In order to apply these views to the second class of facts, we must have recourse to another principle, namely, that when the whole or a great part of the retina has the sensation of any primitive colour, a portion of the retina, protected from the impression of the colour, is actually thrown into that state which gives the accidental or harmonic colour. The term *harmonic* has been applied to accidental colours because the primitive and its accidental colour harmonise with each other in painting." These remarks serve to explain the relations and natural contrasts which colours bear to each other, and the derivation of many of the terms so frequently used in art.

It is important to note the great differences observable in the colours of nature, and in pigments, according to the variations of the light in which they are viewed. By examining each colour in its primary or simple state, and observing all its changes under different aspects, we shall be better able to trace the delicate and unceasing variations which all colours, and especially compound ones, assume under the influence of the changing lights of nature.

The effect which sunlight produces upon all colours, even those which are considered the most distinct and powerful, demands the first attention of the landscape-painter. This light is ever changing,—the roseate hue of morning giving place to the noontide glow; this again passing into the rich yellow tints of the setting sun; these changes affording constant opportunity of observing how colours are affected by variations of light. In fact, coloured bodies are only seen in what artists consider their true colours when viewed by a cool and moderate daylight, and free from the direct influence of the sun. Hence it is that we should choose a painting-room with a northern aspect, as this presents the most desirable light for in-door study.

Thus the colours of natural objects vary according to the *quality* of the light by which they are viewed. A sand-bank, for instance, observed partly in a bright light and partly in shadow, will not appear altogether of its true colour—yellow. The part under shadow will not reflect a sufficient portion of yellow rays; and the bright yellow of the other part will have a tendency to produce on the eye the effect of its accidental colour—purple. Some artists, in depicting such an object, would at once introduce the accidental colour in a pure state, and represent the part of the yellow sand-bank in shadow by a purple tint; but an accurate study of nature does not seem to warrant the total exclusion of the true colour of the object in favour of its complementary tint.

In these and similar cases no precise rules can be given for the guidance of the student, since in no two instances will the effects be the same. The season of the year, the time of day, the brilliancy of the sun, and the state of the atmosphere, all exert their influence. It is to nature, therefore, that the artist must ever have recourse. He must take an enlarged and comprehensive view of her forms under the influence of the thousand aspects presented by these changes; he must trace the result of each effect as it occurs, and comprehend at a glance all that bears upon his subject. Unless this habit of viewing objects and effects is acquired, it is possible to go repeatedly to nature, and, after all our exertions in multiplying sketches, to return with a collection of studies, true to the original only when viewed by one light, and from one point. There may be abundance of green trees, and red-brick walls, because such are constantly to be met with; but a mere repetition of these is of little value, unless they are seen and represented under the various appearances produced by the influence of sunlight, accidental lights and shadows, and aerial perspective.

There is no better method of studying colours, and the various changes which they undergo, than by accurately examining a scene, making a faithful transcript of it under different effects, and at each examination paying particular attention to the kind of light illumining the whole; for since upon this light the entire impression of the scene must depend, a careful study of the light and its effects will relieve the student from the serious embarassment often felt, even by men of great experience, in

determining whether the lights of the picture shall be warm or cold. As they are in nature, so let the artist depict them; taking care to represent the shadows under the influences of a light and effect corresponding to the illuminated parts of the picture; and if this be done faithfully, he will doubtless find all the parts harmonising with each other.

Sir Joshua Reynolds has given some advice, which, though it is especially addressed to historical painters, who have greater power and liberty in choosing and arranging the light, shade, and colour of their pictures, may yet be useful to painters of landscape.

In urging general reasons why the light should be warm, though at the same time leaving the student free to make his own choice, he remarks, "That the lights of a picture ought to be of a warm colour; for though white may be used for the principal light, as was the practice of many of the Dutch and Flemish painters, yet it is better to suppose that *white* to be illumined by the yellow rays of the setting sun, as was the manner of Titian. The illuminated parts of objects are, in nature, of a warmer tint than those that are in the shade. What I have recommended, therefore, is no more than that the same conduct be observed in the whole which is acknowledged to be necessary in every individual part. It is presenting to the eye the same effect as that which it has been *accustomed* to feel, which in this case, as in every other, will always produce beauty. No principle, therefore, in our art can be more certain, or is derived from a higher source."

Whether lights should be warm or cold, as well as other difficulties which arise from too much attention to theory and too little study of nature, will be discussed more fully hereafter, under the different heads of Contrast, Breadth, Aerial Perspective, Tone, &c.

Taking the colours when exhibited in their material state, it is found that red is subjected to many changes under the various influences of light and shade. To study this more carefully, examine a red curtain hanging at the side of a window in the sunlight; the highest light is a mere streak of white, the local colour being lost; next to this, that portion of the curtain in the half-light appears of a yellow-red or amber; in a less degree of light the true colour is perhaps visible, and this, as seen in the deepest shadow, becomes either purple or black, as the light diffused through the

apartment falls more or less brightly upon it. Again, the same curtain will appear reddish brown, crimson, or yellow russet, according to the quality of the light by which it is seen.

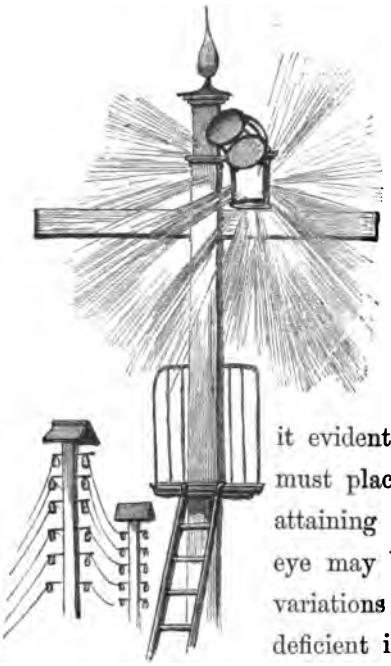
What can seem more positive in colour than a red-brick house; and yet, viewed by a strong sunlight, the red appears changed to bright yellow, while the part in shade is a purply gray. In sunlight red gains in brilliancy, but loses in individuality; in ordinary artificial light, red, and the colours in which red predominates, appear to gain in both these qualities.

Yellow is indistinct in strong light, and when seen by the sun's rays is totally lost; viewed by a subdued or neutral daylight, it becomes more distinct; in artificial light it is greatly changed, and pale yellow can scarcely be distinguished from white. These variations are a source of difficulty to artists when studying by gaslight, until, by repeated experiments, they ascertain the exact amount of change to which each colour when viewed by such light, is subjected.

Blue, being very powerful and effective in strong light, is essentially a daylight colour; but in a less degree of light it assumes a more neutral hue. It does not reflect so much light as the other primaries. From this cause, and from its assimilating so closely to the general tint of the atmosphere or to mist, it is, as a local colour, soon lost in the distance.

The above is a brief account of the principal changes that take place in the primitive colours under different lights. Similar changes will, in a relative degree, take place in colours formed by combinations of the primaries, each compound partaking of the qualities of its constituents. Perhaps the only secondary colour requiring separate notice is green. This is the most prominent colour in landscape; and, as it is a compound of the two primaries most affected by changes of light, it is important that great attention should be given to its characteristics. When considering the green of a landscape, it must be remembered that its general hue is not the bright decided colour, compounded of yellow and blue, in the proportion of 3 and 8, which forms what may be called a true green; it must rather be described as either a mixture of citrine with blue or gray, or a compound of yellow, orange, and blue. Even in this modified state, green is subject to great changes. In its general character it is cool and retiring, reflecting

but little light, and appearing to belong more to the shadows than the lights; and thus its individuality is soon lost in the distance, where it changes into blue or bluish gray. As this colour presents the greatest discord to blue, in order to produce a good effect, a harmonising warm purple haze, the reddish gray of the atmosphere, or the same tint of clouds, is continually required to assimilate its masses with the azure blue of the sky.



Section IV.

ALL PERSONS CANNOT EQUALLY DISCRIMINATE COLOURS.

THE well-known fact, that individuals possess, in very different degrees, the power of distinguishing, not only minute shades of the same colour, but also the colours most strikingly opposed to each other, renders it evident that any want of capacity in this respect must place an insurmountable barrier in the way of attaining excellence in the art of colouring. The eye may be remarkably acute in the perception of variations in form and outline, light and shade, yet so deficient in the power of appreciating the different colours as to render its possessor utterly incapable of applying them with any degree of accuracy. Public attention has of late been more forcibly directed to this imperfection in the visual organs by the philosophical investigations of Sir David Brewster, Dr. George Wilson, of Edinburgh, and others, which have resulted in the discovery that this defect, called *colour blindness*, is far more prevalent than was supposed; so much so, indeed, as to render it most desirable that every railway official, intrusted with the charge of signals, should be carefully tested as to his power of distinguishing between the colours, red, green, and white. We shudder at the mere contemplation of the fearful catastrophe which might occur from mistaking a signal implying danger for one denoting safety.

As an instance of imperfect vision, we may quote an anecdote related of the celebrated chemist, Dr. Dalton, who thought the red gown in which he was installed as a Doctor of Civil Law, at Oxford, was a blue one. Some of his friends, in order to test this peculiarity of his vision, substituted red stockings for those he usually wore, when the Doctor put them on without remarking anything particular in their appearance; and even

on his attention being directed to them, he only remarked that they looked rather dirty. Perhaps the whole amount of light conveyed to his eye was merely diminished, without being otherwise changed; and thus white stockings may have appeared to him gray instead of white, as they would have done had all the rays entered his eye, and impressed their full proportions on that organ. I can give no opinion as to how far this defect may be remedied by a careful education of the eye. We know that by cultivation the organ of hearing may be rendered more capable of distinguishing sounds; and, judging from analogy, we may suppose that the organ of sight also, by proper training, might be equally improved in its power of discriminating colours; at all events, it is important to those desirous of studying colour to ascertain their exact amount of power in this respect. Should they discover any defect, not to be remedied either by cultivation or the science of the oculist, they must be contented to confine their efforts in art to the study of those effects which can be produced by the neutrals, black and white. These become more effective, as well as attractive, by employing them in the form of chalks or pigments on gray paper.

Some difficulty in naming colours may arise, not from any imperfection in the visual organs, but from the want of a clear and distinct nomenclature; thus we often allow ourselves to designate as yellow those colours which are mixtures of yellow and red, or of yellow and blue, in different proportions. The pigments denominated red are by no means pure; in fact, the landscape-painter's colour-box may not contain one red; as carmine (the nearest approach to a pure red) is seldom used in his branch of the art. Again, there are blues, like Prussian blue, of a greenish hue; while others, like smalt, are purple. With the view, then, of avoiding confusion, as well as unnecessarily taxing the memory of the student, we must be careful to render the names of colours and their compounds as simple and accurate as possible; and to impress their appearance more fully on the minds of youth, large diagrams representing the primary, secondary, and tertiary colours, with their names attached to them, would be a valuable addition to our elementary schools. The pupils should be exercised by looking at these in bright sunshine, ordinary daylight, and the declining light of evening, and thus be taught to distinguish each colour

clearly. Such a practice might form the preliminary study; the primaries should then be taken, and the pupils directed to ascertain whether, after looking steadfastly at each in the sunshine, they can perceive its accidental colour, on the eye being directed to a white surface. These, and similar exercises, would strongly impress the mind of the student with the general principles of harmonious contrasts, and thus prepare a sure foundation for good and effective colouring; rendering unnecessary much of the present endless and unprofitable labour of describing tints and mixtures.

Among the primary colours, yellow and blue are least liable to be mistaken; while red is the most difficult to be distinguished, some persons not seeing it as a distinct colour at all, but merely as a neutral gray, others mistaking it for green, its accidental colour; which among the secondaries presents the greatest difficulty; and this is by no means extraordinary, when we consider how closely, in many of its qualities, it resembles blue, and how strong the affinity it possesses for its accidental colour, red. This affinity causes some difficulty even to those who have no defect of vision; thus the eyes of locomotive-engine drivers, having been fatigued by dwelling on the bright red light of the fire, have a tendency either to lose the power of perceiving any less intense colour, or to produce the accidental colour, green. In this state their eyes cannot at the moment distinguish coloured flags, which must necessarily have far less brilliancy than the light at which they have just been looking. In the other two primaries, the affinity for the accidental colour is not so strongly marked.

In regarding these phenomena, attention must be paid to the distance of the coloured body from the eye. Dr. Wilson instances a young civil engineer who could not distinguish, unless he was close to them, "a red from a green light, yet he could tell a blue from a red light, at any practical distance." Distance, therefore, is an element of deception; indeed, experiments have shown that the majority of those who are colour-blind can distinguish, with great ease, red from green, when these colours are bright, near the eye, and well illuminated; but the power of discrimination diminishes with great rapidity as they recede from the coloured object. Colour-blindness, in those unable at a little distance to distinguish red from bright green, may be detected by their inability to perceive the

difference between russets and ruddy browns, near at hand, from olives and dark greens.

Some amusing trials were lately made by the author to test the capabilities of a pupil whose friends wished him to learn drawing, but who, either from idleness or diffidence, maintained that he had no eye for form or colour. This youth could tell to an inch the height of any of his companions; he knew, to the breadth of a line, any difference in the size of a ball; and in length and thickness of cricket-bats he was quite an oracle. Experimenting on his perception of colour, it was found that he could distinguish, without difficulty, the most delicate variations in the colour of the hair or complexion, and what was doubtless a far more interesting exercise of his visual organs, he could, without hesitation, choose by its tint the ripest peach or apple, and appreciate the down on the untouched plum or grape.

SECTION V.—EXPLANATION OF TERMS USED BY ARTISTS.

AS the object of this treatise is to place before students in art the results of the labour and researches of others in as simple a form as possible, it is of the greatest importance that the system laid down, and the terms used, should be in accordance with those employed by the highest authorities. Fortunately we possess a large number of rules, founded on well-tried principles, which, having been adopted by artists who have left imperishable names, remain still on record in the productions by which their fame was acquired. The effect of these principles, even when not defined in language, has repeatedly appeared in great works of art; and it is the author's desire to notice and illustrate them in as clear a manner as the united efforts of his brush and pen will permit. In conveying this knowledge, great difficulties present themselves, which arise not so much from deficiency of information as from the remarkable irregularity and indefinite character of the various terms used by artists and amateurs. To obviate these, we proceed to notice some of the terms generally employed, and to explain the sense in which they are to be understood throughout this work.

The names of the prismatic colours, established by Newton and other natural philosophers, being clear and distinct, have been employed without hesitation in Section II. It has been explained that artists, after dividing these colours into primary and secondary, have taken in addition the tertiary compounds, or primary hues arising from the admixture of the secondary colours. Each of these hues, containing one of the three primaries in a double proportion, they distinctively call a hue of that primary to which it bears the greatest affinity. The term first or primary hues is applied to colours of this class, because they come immediately in order after the first and second groups of colours.

The word TINT is to be considered as particularly applying to colours in

their different varieties; thus yellows are lemon-yellow, straw-colour, amber, &c.; red appears as rose-colour, crimson, scarlet, &c.; blue, as sky or azure blue, indigo, &c.; these being the tints of yellow, red, and blue respectively. In oil-painting, colours tempered or subdued by white are called TINTS; they correspond to those which in water-colours are reduced by water. The latter are sometimes designated STAINS; but this term is seldom used, unless to express an almost imperceptible effect, such as that produced by the portion of a delicate rose-madder tint left on the sky, after the whole colour has apparently been washed off. As the drawing, however, advances towards completion, the result is obvious; the stain itself is scarcely seen, yet the effect it produces—namely, a warm aërial glow—prevents the blues, afterwards laid on, from looking positive and cold in colour: in this sense, the term may be used in the practice of art.

The term HALF TINTS expresses those mean or middle degrees of colour either between full illumination and deep shadow, or between the full strength or expression of the colour, and those shades of it in which the colour is scarcely discernible; these are sometimes also called Broken Tints. Rubens is supposed to have placed full tints side by side in his pictures, and then to have mingled them by sweeping or dragging a brush over them; thus harmonising the whole by blending the colours.

The term SHADE may denote different degrees in the depth of colour, but belongs more particularly to shadow, or to colours in shadow and their deeper tones, when they have more affinity to darkness than to light. I believe this to be the general acceptation of the term. Hay has so used it in his *Nomenclature of Colours;* for in Plate V. of that work, fig. 1, there called a tint, is of a pale rose-colour, and contrasted with fig. 4, called a *shade* of myrtle green. Again, when these experiments are reversed in Plate VI. the green is called the *tint*, and the term *shade* applied to a deep chocolate, or shade of red.

TONE—a term evidently borrowed from the art of music—is used in a more extended signification than either *tint* or *shade*. It may be considered as expressing the harmonious arrangement of combined tints and shades, being equally applicable to neutral colouring: thus, we may say of a sepia or gray drawing that it requires *tone*, meaning that the quantities of light

and shade should be blended in a greater degree. It is also applicable either to cool or warm colours; thus, speaking of a picture, we may say that it has a cool tone or a warm tone, or that it has become toned by age. Haydon, in his Autobiography, speaks of toning down his pictures with a large brush and asphaltum, and describes this act of giving tone to his pictures as one of the artist's greatest delights. *Tone* may likewise indicate the opposite of rawness. *Tones* may be said to be pure when they are obtained by the primary hues being placed in such positions that the eye regards the whole as a mass of various colours blended into one; or they may be denominated pure, when they result from true mixtures of the secondary colours. The term may be applied when describing golden or autumnal hues, deep reddish browns, as chestnut or auburn; the expression *full-toned*, when speaking of such colours as pomona green; and *deep-toned*, when indicating those fine shades of red and purple called marroon, or olive green. Lastly, *tone* is used by artists to convey the idea of that blending of colours by the addition of some other or others in a transparent state; which, when done with judgment, assists in harmonising the colouring, and adding to the repose and breadth of the whole. We use this term very freely,—far too freely,—and thus render its signification very vague.

UNITY—a term equally applicable to a painting either in respect to its light and shade, or to its colour—implies an harmonious connexion of colours; thus one colour may be united to another, not by position and concord alone, but by some third condition; as when a transparent glazing of colour passes equally over the two, they become blended or united. Colours may be united in a pure state by stippling, or interlacing them, as it were, with one another in small portions. In its widest sense, *unity* means that the various parts of the picture are so systematically arranged as to convey the idea of their perfect connexion.

BREADTH implies that either light and shade, or colour, are in *masses*, and not divided into small portions. The expression *breadth of light* does not convey the idea of a mass of light equally intense in all its parts, but of one graduated insensibly by half tints, and having a central spot like a focus, whence the light, diminishing by degrees, is diffused throughout the picture or adjacent parts. Breadth of shade signifies that the shadow is not broken

or separated by any small portions of light, but in one mass, varying in depth, some parts being of greater intensity than others. We may likewise employ the term breadth when speaking of a mass of colours, which, however various in hue, are for the most part either of a warm or cold character, and undisturbed by the prominency of any single colour.

For examples of breadth of shadow, we cannot have a finer master than Rembrandt, who, by a large and well graduated mass of shade, frequently caused a small amount of light to be extremely effective. It is said that during his early youth he lived in a windmill, the only light admitted to the interior of which came through a small upper window; and thus, being left to study the effect of concentrated light, he ever after treated out-door as well as in-door subjects in the same manner. On the other hand, for illustration of breadth obtained by the introduction of large masses of light, there can be no hesitation in referring the student to the pictures of Turner, who, in strong contrast to Rembrandt, was well known to be greatly attached to this treatment of subjects.

Rembrandt.

Turner.

BREADTH OF TONE is obtained by placing not only the primitive but the secondary colours, and primary hues, in such relative positions that the eye passes on without any sudden interruption.

HARMONY expresses the arrangement of colours, varying in their propor-

tions and degrees of purity, in such positions that the result is agreeable to the eye. This does not imply that there shall be any certain proportion observed between the warm and the cold parts. Harmony may exist in pictures, or in combinations of hues, &c. which are nearly all cool, and also in those of which the tones are of the opposite character,—yet it is essential that the colours, hues, or tones composing a picture should be so arranged that, however varied the parts, one prevailing sentiment may pervade the whole. Thus, should the majority of colours and hues in a picture be illuminated by a warm setting sun, and the rest by a pure white daylight, the whole would be deficient in harmony; or should some portion of colour in the form of a flag, having a tone approaching that of the sky, but not of the whole mass (as rose-colour or emerald green), be introduced on a stormy sky of a lurid reddish tone, it would be out of harmony with the rest of the picture, jar on the feelings, and annoy the sensitive eye. This want of harmony would be evident to the most uneducated in art, nearly all persons being conscious of any incongruity of tone, though few can explain the cause. The remains of early colouring, in the Egyptian tombs and the buildings of Pompeii, show that the decorators among the ancients produced harmony by the use of the three primitive colours in conjunction with black and white; this they did by skilfully adjusting these colours in due proportion; when their union with black and white—which, representing light and shade, possess great harmonising power—gave the desired result. The effect attained by the well-judged use of these pigments was greatly assisted by the air, distance, and the light and shade of the building in which they were placed. In speaking of the changes to which colours are subjected by distance or aërial perspective, even in the purest air and climate, it has been remarked, that all the primitives thus changed become broken colours. For instance, a strong pure yellow becomes a broken yellow; red is changed to orange; blue to an indefinite gray; hence, in estimating the conditions of harmony, distance and the prevailing atmosphere must be taken into account. Lastly, it should be remembered, that although such harmonising influence has great effect on the expanse of nature, yet it has little or none on the picture; for this being only a few feet from our eyes, the space intervening occupied by the atmosphere is too

small to be subject to any sensible change; so that we must rather exaggerate the natural effect, and mark all the changes occurring through these influences.

LOCAL COLOUR. The natural colour of an object, when seen in ordinary daylight, and at a convenient distance, as a sheet of paper at arm's-length, a tree at twice or thrice its height, &c. The true local colour of any object is not visible in sunlight, being then lost in light; nor in shade, for then it is either absorbed in darkness or altered by accidental influences, such as reflections, &c. Owing to these influences, it follows that very little of the local colour of an object is depicted; nor should the student be too anxious to show it as he knows it to be, but rather as it appears at the time when he is studying it. (See Chapter I. Section III. on the "Effect of Predominating Light.")

TAKING OUT. Recovering the light or white of the paper, by removing, in various ways, the colour previously laid on; a mode of obtaining high or secondary lights that is in some instances more effectual than using body-colour. It gives great force, texture, and character to the foreground, and is more fully described in the "Mode of Working," Chapter III. Section IV.

BLOTTING IN. An expression used by many water-colour artists when they want to describe the laying in masses of varied tones, graduating one into another. This is done with a moderately-full brush, so that the colours mingle to a certain extent, but not so full as when required for a wash; it is supposed to represent the general middle tone, and is laid in without attending to either the highest lights or the deepest shadows. More fully described in "Mode of Working."

SCALE. Besides the usual meaning of objects being drawn to a scale, when one-third or less of the size, &c., this term is used to denote the relative degrees that the tones of a picture hold to nature, or to each other. For example, a picture may be executed in a high scale when pure white is introduced, and the tints are graduated with reference to that colour, as they are in many of Turner's later pictures; or in Titian's, where they graduate in rich deep tones from yellow; or in Rembrandt's, descending rapidly from a small portion of high light to a middle tone, but graduating more slowly in the deeper tones.

FOREGROUND. That part of the picture which appears nearest to the spectator. With the exception of such portions of the landscape as mountains, whose large dimensions cause some of their parts to retire, every object may in turn occupy the foreground: the careful delineation of parts, instead of complete landscapes, should therefore form the young artist's first studies. This is so important that it is treated at length in Chapter IV. Section III., and in a small work called *Foliage and Foregrounds.*

BACKGROUND. An expression more used in portrait and figure subjects than in landscapes, as the different parts of a landscape are more frequently mentioned in detail; as sky, distance, middle-distance, &c.

ACCESSORIES. More used in figure subjects or portraits; referring to objects and materials independent of the principal subject, being used to fill up parts that without them would appear naked, to establish a balance between the masses, to form the contrast, to contribute to the harmony of colours, and so add to the splendour and richness of a picture. Little used in landscapes, as, if the principal object be a ruin, or some interesting point, we prefer when speaking to name the surrounding objects in detail, as mountains, boats, figures, &c.

KEEPING. Although generally considered as attention to the proper subserviency of tone and colour, is sometimes used vaguely; it may mean—not in perspective, either linear or aërial; thus some part of the picture not in unison with others is *out of keeping*, meaning out of *harmony*, wanting some quality to put it in its proper place,—failing in distance, force, or colour; also to be *crude* is to want keeping. Another word of the same general signification among artists, but scarcely defensible, is *raw* or *rawness;* which, if allowed, would necessarily require another term, namely, *cooking;* and this would certainly be exceedingly annoying to artists, the majority of whom would much rather be told that their painting was raw than that it wanted "cooking:" we should therefore be cautious in using indefinite terms.

REPOSE. A quality not difficult to understand, but very difficult to obtain without monotony. Large ideas of the subject at the commencement, and a correct appreciation of the different value of the various parts, will assist the young artist in preserving repose, or the

quiet sustaining harmony of the whole. It applies to form, light and shade, and colour. Those portions of the picture in repose will then *support* the more attractive or brilliant spots; they may at the same time repeat or echo the principal light or colour, and thus prevent these spots from being too isolated or unconnected with the rest of the picture, which may, under such circumstances, be said to be well *put together*, or, when deficient in these qualities, want *putting together*.

MOTION is used more with respect to lines and forms than to colour, and expresses variety and action, in opposition to repose.

RELIEF may refer to small as well as to large subjects. A drawing of a fly may want *relief*, if the delicate cast shadow of the body, limbs, or wings, fails to convey the idea that the insect is resting on its legs at a slight distance from the paper. Young students must not suppose, that to obtain force an object must be relieved by a violent opposition of light and shade, or an equally strong opposition of colours; nor is it even necessary to have cutting lines or edges that may cause the object to be mistaken for reality, like the representation of a damaged engraving with the corner turned up, or the head of a smuggler thrust out over the gold frame. This is taking a very narrow view of the term. On the contrary, an object may be sufficiently relieved by delicate alterations in tone, or contrasts of harmonising colours, and yet be mainly absorbed in the surrounding objects or background; in nature an object is rarely equally relieved all round, more generally the larger quantity of the outline is scarcely distinguishable either in form or colour from them, and this repose gives double effect to the smaller portion that *tells*, or is *telling;* that is to say, that has striking qualities.

EFFECT. The impression produced upon the mind by the sight of a picture; but pictorial effect, or effects, we take to mean some predominating light and shade or colour in addition to those belonging to, or produced by, objects in the picture. This may influence a part or the whole of the scene, and may represent a pictorial phenomenon of nature, such as the rays of the sun darting through a cloud, or from behind a mountain at sunrise, sunset, &c.; rain, with rainbow, a storm, &c. The simple light and shade belonging to each object, however carefully represented, will not make an effect, nor

will objects thus treated, when placed side by side, form a picture; this appears to be forgotten by many young artists, who imagine that if they paint each object with exceeding care, that they must at last make a pleasing picture; on the contrary, one portion of the scene must have reference to another. If the distance is all minutely painted up to the focus of the eye when looking at it, and afterwards figures be added equally minutely studied and important, the whole effect is injured, and the eye is distracted by continually looking from one to the other. It is said that when Mulready first exhibited his "Whistonian Controversy," the table-cover was so beautifully finished and coloured, that it attracted the attention from the countenances of the players, and it was not until he had subdued the pattern in form and colour that the great doubt and anxiety depicted on the faces were noticed, and the effect rendered complete. *Accidental Lights* or *Shadows* may form part of an effect. (See Chapter III. Section II.)

SENTIMENT. This term is used by some for the predominating effect or story of the picture.

KEY—FOCUS. Artists and colourists use these terms to express that spot or concentration of light or colour that appears to combine or contrast with most energy the tints or shades diffused throughout the work; they may then be said to be focused. Thus, many of the pearly grays and delicate broken purples or greens in a marine subject may be set off and united by some bright spots on a painted buoy lying in shallow water or the sea-beach. This may be the key to the whole colouring; it may also be made the focus to the light and shade, and is thus made serviceable in more than one of Turner's pictures besides the "Fighting Téméraire." Artists have great faith in the mysterious power of this key or focus; accordingly it is supposed not only to unite and bring forward tones scattered over the picture, but also to send some back, and clear up others. To do this it is not wonderful that lights and shades, and also colours, have to be greatly *forced* or exaggerated, and that emerald green and vermilion are often harnessed side by side to drag a crude performance into unison. However, to force the effect by exaggerating in some degree the difference in distances, or the effect of air, mist, or light, and thus concentrate more power than would be found in an equal portion of the panorama, may sometimes be allowed,

but the young artist should first be content simply to copy the effects he finds in nature.

DIRTY TINTS, in colouring, express that the tone neither represents true light and shade, nor yet true colouring. Thus, if spots of impure opaque colour are produced in the sky or distance where we know there ought to be pure aërial tints, and if these spots indicate no form, but only distract the attention, the whole may be called *dirty*. Should this occur in the delicate shading of a face, not only in the shadows, where there ought to be no irregular spots, but also in the light flesh-tints, it is particularly observable and reprehensible. Dirty tints are most frequently the result of inexperience or timidity in using colours; thus, passing wash after wash of various pigments, without attention to their different qualities, will soon produce this disagreeable result. To prevent it, the student should make experiments with his pigments, and thus learn beforehand the result and effect different washes or mixtures will produce. In landscape, if the three primitives are used in too equal proportions, there will arise a degraded tone, neither like pure gray nor brown, but resembling opaque dirt; and if this is rubbed about, or produced by the repetition of washes or tints over one another without order, the whole will be void of transparency or any determinate connexion with one primary more than another. Nothing produces this unwished-for effect sooner than laying on the first general wash too strong, and with an impure yellow, for the red and blue following will be sure to produce dirty tones. If, in such a case, washing with a sable and plenty of water does not overcome it, and prepare it to receive some purer tint of a more agreeable tone, it is better to sponge the whole and fairly remove the faulty yellow laid on at the beginning.

BROKEN COLOURS are produced by the mixture of one or more pigments; or pigments may be found containing a slight proportion of one with a larger proportion of another. Thus, yellow ochre is called a broken or subdued yellow, having a small quantity of reddish brown in it, and it is safer to use on many occasions than breaking yellow down by too much mixing.

AIR—ATMOSPHERE. The imitation of the effects of the atmosphere, regarded as a fluid medium through which forms are visible. When the forms are well detached, the picture has air.

EXECUTION, HANDLING, MANIPULATION. These terms, with many others, are used when speaking of the mode of working necessary to bring about an artist's performance. However much we may fear mannerism in our way of expressing our ideas, we must not prevent, by too much caution and timidity, the young student from endeavouring to acquire at the very beginning a vigorous and effective way of expressing his ideas. When learning a language, every word is first pronounced slowly and with great precision; the pupil hears his teacher pronounce it over and over again, then he endeavours to imitate the exact sound; and, going on to sentences, he makes equal efforts to obtain the proper emphasis, and at last he succeeds in giving the just expression and value to every word he utters. All this seems very simple in language; it applies equally to art. Let the language and grammar of art be first learned in the same precise and decided way, under the eye of a careful and expert master; let the pupil watch his mode of handling his different instruments, and not grudge labour in endeavouring to do the same things in the same way; he will then go to nature with some power at least of imitation, and not feel so utterly at a loss that he is afraid even of touching a pencil or making the slightest sketch. Let him adopt the best and most expressive style he can find. If it does not express his own ideas of nature, he will soon invent a better; but surely, in this language as in another, if "English-French" is different from "French-French," it is better than no French at all.

MANNER—STYLE. (See Chapter IV. Section XI.)

HATCHING, STIPPLING, SCUMBLING, GLAZING, DRAGGING. (See "Mode of Working," Chapter III. Section IV.)

HIGH LIGHTS. (See "Light and Shade," Chapter III. Section II.)

CHIAR'OSCURO, or light and shade. (See Chapter III. Section IV.)

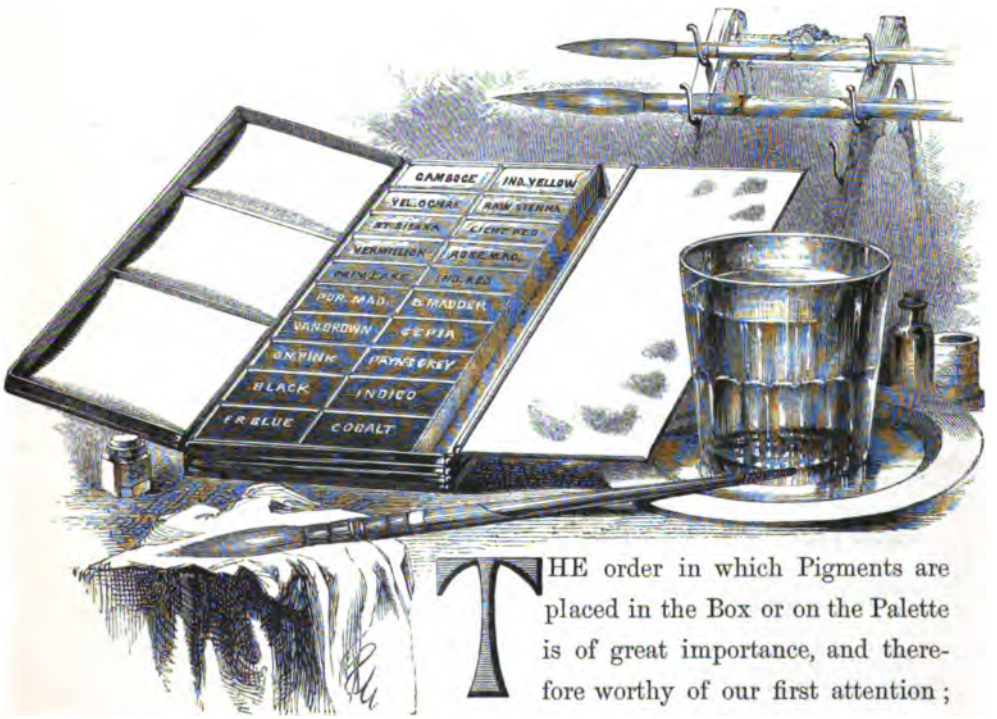
COMPOSITION. (See Chapter III. Section I.)

CHAPTER II.

MATERIALS.

SECTION I.—ON THE POSITION OF PIGMENTS IN THE BOX, OR ON THE PALETTE.

THE MOIST-COLOUR BOX.



THE order in which Pigments are placed in the Box or on the Palette is of great importance, and therefore worthy of our first attention; for a judicious and exact arrangement of colours in respect to the various hues and tints affords considerable assistance in the practice of the art. The pigments should always occupy the same positions in relation to each other, in order that there may be no hesitation in dipping the brush into the colour required. A brilliant effect of sunlight and shadow may pass away, and with it the opportunity of recording its most striking features, while search is being made, on a disorderly palette, for the colours requisite to give a faithful representation of its fleeting beauties. It is precisely in such

transient effects that memory generally fails to supply the want of memoranda made at the moment.

Again, in the working out of a favourite conception, every student must be aware of the value of facility of hand. While he feels the whole power of his mind scarcely adequate to the realisation of the glowing images of his fancy, he should not voluntarily subject himself to the irritations and loss of time proceeding from an absence of order in the disposition of his materials. No one, so far advanced in artistic power as to permit himself a flight into the regions of imagination, can ever designate such trials as petty. He must feel that their influence may suffice to tarnish the splendour of the brightest day-dream in which he may allow himself to indulge.

In the arrangement of the pigments, the Author has adopted that order of succession which, by experience, he has found most useful and convenient.

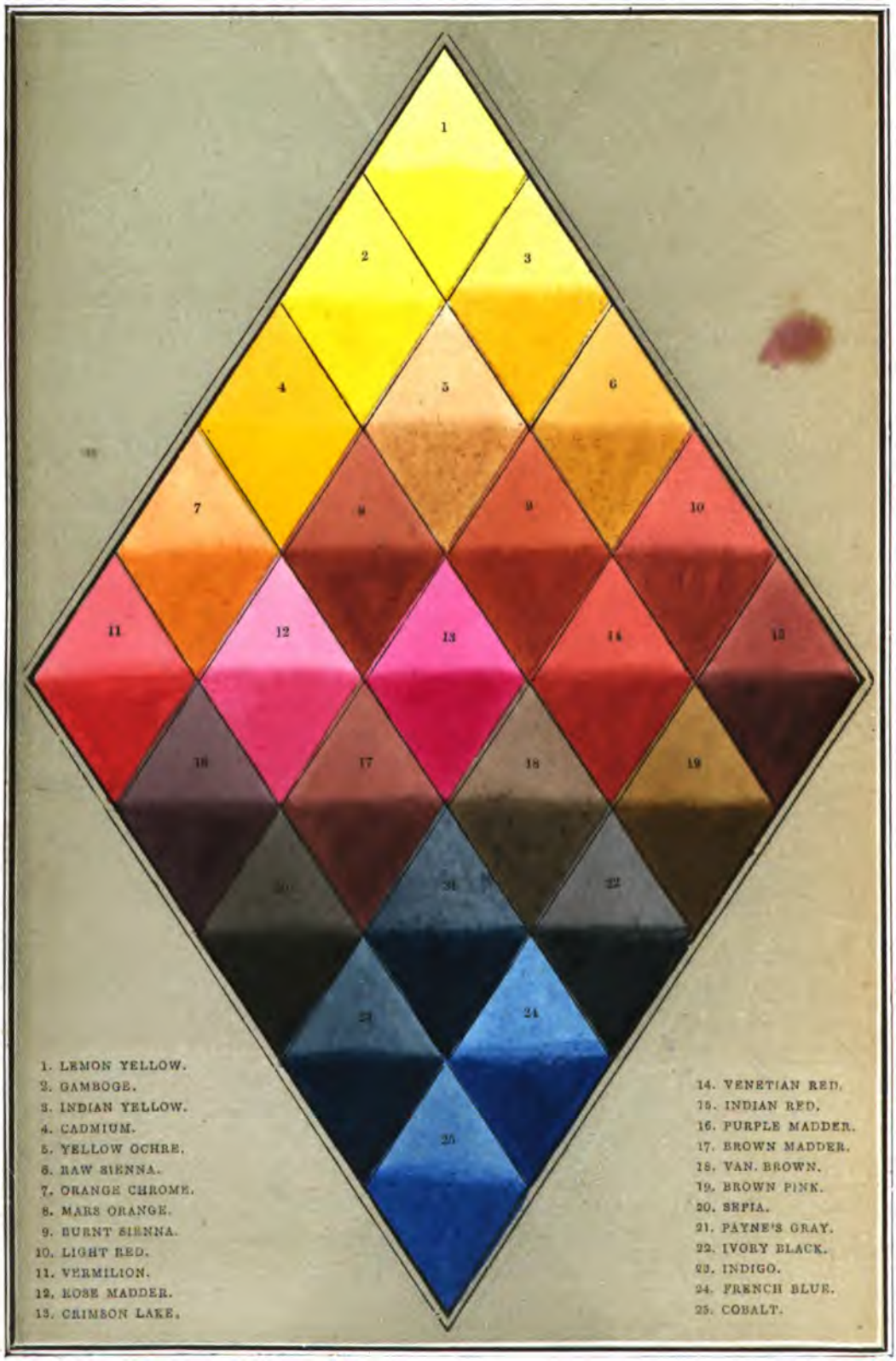
In the moist-colour box, represented at the head of this Section, twenty pigments are given, consisting of those best adapted for Landscape-Painting. Commencing at the upper end, they succeed each other in the following order :—

GAMBOGE.	INDIAN YELLOW.	PURPLE MADDER.	BROWN MADDER.
YELLOW OCHRE.	RAW SIENNA.	VANDYKE BROWN.	SEPIA.
BURNT SIENNA.	LIGHT RED.	BROWN PINK.	PAYNE'S GRAY.
VERMILION.	ROSE MADDER.	BLACK.	INDIGO.
CRIMSON LAKE.	INDIAN RED.	FRENCH BLUE.	COBALT.

The box being placed on the left hand, or on that side of the drawing, the yellows will be furthest from the person. The rounded cover of the box, being divided into three cup-like forms, is for mixing washes when out of doors and it is inconvenient to carry saucers; the flat flap is that on which the brush is touched to mix or vary tints. In large works, however, it is almost necessary to carry a few saucers, and three or four of the pigments the most used, such as cobalt, yellow ochre, gamboge, and brown madder, in collapsible tubes; these can be placed in large masses on the palette, or rapidly made into washes in the saucers, for covering large surfaces. The pigments contained in these boxes ought not to dry and crack; but as they will sometimes do so when long exposed to the sun and drying wind, they

HARMONIOUS ARRANGEMENT

OF TWENTY-FIVE OF THE MOST USEFUL PIGMENTS.



1. LEMON YELLOW.
2. GAMBOGE.
3. INDIAN YELLOW.
4. CADMIUM.
5. YELLOW OCHRE.
6. RAW SIENNA.
7. ORANGE CHROME.
8. MARS ORANGE.
9. BURNT SIENNA.
10. LIGHT RED.
11. VERMILION.
12. ROSE MADDER.
13. CRIMSON LAKE.
14. VENETIAN RED.
15. INDIAN RED.
16. PURPLE MADDER.
17. BROWN MADDER.
18. VAN. BROWN.
19. BROWN PINK.
20. SEPIA.
21. PAYNE'S GRAY.
22. IVORY BLACK.
23. INDIGO.
24. FRENCH BLUE.
25. COBALT.

LEIGHTON, BROTHERS.

should be shut up as soon as possible. A small piece of sponge, cut square and kept wet, or a damp strip of linen laid over them before they are covered at night, will render them moist and easier to work. If at any time a pan of colour is put in to replace one exhausted, the bottom of it should be either pasted or gummed, as otherwise it is apt to shake about, and sometimes adhere to the cover.

Although portable moist-colour boxes rarely contain more than the above list of pigments, there are many more which the experienced artist finds of use, either in obtaining certain effects, or as substitutes for some of those already named. An enlarged scale of twenty-five pigments has been placed before the student in Plate 4, having an order approximating to that which they occupy in the box, and at the same time extended in such a manner as to present to the eye, at one view, an harmonious arrangement of colours.

The above pigments have been selected as most generally useful and eligible for water-colour painters. It would be easy to increase their number; but it is better for the student to become thoroughly acquainted with these in the first instance, and afterwards, if desirable, to add or substitute others.

In this general view of the pigments employed, we may as well note how far it is possible so to dispose them as to imitate that breadth of tone frequently observed in nature, where one hue passing into another that differs from it only in a slight degree yet harmonises with it, is constantly creating agreeable changes and gradations of colour. This almost imperceptible alteration of colour is distinct from those more striking oppositions called *contrasts*, and although not apparently so important, should occupy the young artist's most careful attention, he will then perceive that colour in nature is almost always gradated; the study of it, therefore, in detail, as well as contrasts, will form the subject of some illustrations in a future portion of this work.

SECTION II.—DESCRIPTION OF THE QUALITIES OF PIGMENTS.

COLOURS, or pigments, as they are more properly called, are now prepared either in a moist or dry state. The moist pigments are so perfect in their preparation, at the same time so portable and convenient, that they are almost universally employed. Presenting a mass of pure colour, from which any quantity can be obtained without previous rubbing, they are particularly serviceable in sketching from nature. In the forcible painting required in the foreground of a picture, they become doubly valuable; for in this part of the subject the artist has need of small portions of pure colour to drag, scumble, or intermix with those already supplied; so that, instead of losing, he may rather add to the rough texture of the paper; and this power he obtains by taking up on the point of his brush such pigments as he requires; the main body of colour in his brush not being washed out, but remaining to influence more or less the portions thus taken up.

But useful and convenient as they undoubtedly are, they have not superseded the dry or cake colours for the pure and delicate washes and tints required at the commencement of every large work; these are best executed with the latter, rubbed up either on an earthen palette or in saucers. The tints made with the pigments in cake are purer, and give more appearance of air to the sky and distance than can be obtained with the moist colours. When cake colours are employed, it is recommended that a few of those tints required in the sky should be rubbed on a large flat slab, or tile, about twelve inches square. This will give space to prepare a sufficient quantity

to allow of washes or tints in the sky or distance being completed without again having recourse to the colour-box. By this means those slight alterations in the tint, which are almost inseparable from every renewal, are avoided.

Having included nearly all the pigments most eligible for the water-colour painter in the preceding list and accompanying plate, we will now proceed to give a brief description of their prominent qualities; but, before doing so, we may remark, that among these almost every artist has his favourites, for which, by frequently resorting to their use, he shows his predilection. The student, however, should beware of giving way to any such bias in favour of a particular pigment; as such a custom, joined to an ill-regulated fancy, may affect the whole colour of his works.

In this selection will be found those pigments considered by Mr. Field and other authorities as permanent in most situations, and under most circumstances. One or two of them, adopted only for particular effects, will be described hereafter. It must be remembered, that pigments are likely to stand best, and are most transparent, where they are least mingled with others. We must therefore select such as represent the colours we desire to produce, and degrade them as little as possible by mixture. By studying their different hues, in the graduated scale, Plate 4, the student will become acquainted with their fitness for his purpose, and thus be greatly assisted in his selection.

On the palette, as well as in the box, the same order should be retained, commencing with yellow, as being the best representative of light, and passing on from left to right, to orange, red, russet, citrine, and neutrals, and lastly to blue. Each division of the diagram shows the pigment with a gradual increase of colour.

It is hardly necessary to explain that light or dark, as regards these examples, does not imply a change in the colour used, but that the difference in their degrees of intensity is caused by more or less of the white light of the paper appearing through them.

In addition to the pigments displayed in the diagram, we must mention *white;* for although, strictly speaking, it cannot be considered as a colour, but rather as an opaque body representing light, yet it is so much used to

mix with other pigments, and is so important in recovering light on certain parts of the picture, that it claims precedence in our descriptions.

WHITE.

Zinc white, or oxide of zinc, called also Chinese white, although it has not the opacity or solidity of white-lead, is nevertheless, owing to its permanence, the more eligible pigment. Employed with discretion, it is of great importance in water-colour painting; affording us, when blended with some of the warmer colours, the means of recovering any bright lights which we may have lost. By using it thin, and scumbling over some of the distant tints, an *appearance* of air is given; but it must be confessed it is air charged with moisture, not the pure transparent medium, through which the form and colours of all objects are so distinctly seen. It is more successfully used in opaque touches in light, and confined to the foreground, and should be toned down by the addition of some warm pigment; when dragged over the rough paper, it gives great solidity, richness, and variety of texture. The preparation has arrived at great excellence; and the pigment is generally pure and easily worked, drying without any material alteration of colour; but as the least trace of iron will cause it to change colour with sulphuretted hydrogen, or the foul air from gas, drains, &c., all who use it should try it themselves, by laying a wash on a strip of pure white paper, one half of which they should submit, while wet, to such gases; the other they should carefully guard between sheets of paper. On comparing the two, they will easily perceive whether the white changes colour; if it does, they may depend upon it all their lights will go in the same way, if exposed to similar influences.

LEMON YELLOW.

A luminous vivid yellow, rather pale and opaque, but still, being permanent, much to be preferred in water-colour painting to Naples yellow, which has not that quality. It is sometimes used in the first light washes in the sky or distance, and also over other colours; or, when slightly modified by them, it may be applied in small brilliant touches, in order to give the brightest lights on foliage.

GAMBOGE.

A bright transparent yellow, very important in making most kinds of green; those with indigo or Prussian blue are clear and cool. With the addition of burnt Sienna, or other transparent orange colours, it makes a rich and easily-varied autumnal tint; with sepia, Payne's gray, or black, it forms sober greens, as useful as they are numerous; and with brown madder, a rich autumnal tint. Not having a retiring quality, caution is necessary when employing it in the distance. Gamboge is a vegetable gum; and though not quite permanent, is considered one of the best yellow pigments for the above purpose.

INDIAN YELLOW

Has greater body and depth of colour than gamboge, and is of a rich golden hue. Combined with indigo, Prussian or French blue, it makes deep intense greens; and with burnt Sienna or brown madder, pure and glowing autumnal tints. Care, however, must be observed in its application, as it is apt to produce tints too strong and forced. Having these qualities, it is more employed in the foregrounds than in the distance.

YELLOW OCHRE.

The ochres are among the most ancient and valuable of our pigments, and are found abundantly in this and other countries. They vary very much in colour, from a bright (not vivid or pure) yellow to a deep brown. They are not powerful; but possessing a slight degree of opacity and a retiring quality, they are frequently employed in forming the subdued greens of the middle or extreme distance. The most useful is yellow ochre, which may be considered in some degree broken—that is to say, a mixed colour, partaking slightly of a reddish character; this produces a neutral quality, causing it to be often used in combination with another mixed colour, namely, brown madder, to make a warm neutral orange for the first or harmonising tint, intended to give a general idea of sunlight and warmth, without any positive colour. The other ochres, with the exception of Roman

ochre, are little used; the latter is deeper, and rather more transparent than yellow ochre.

RAW SIENNA.

Sienna, in its natural state, is of rather an impure or tawny yellow. Being very transparent, it is excellent for forming the first greenish hues of water, whether as seen on the placid lake or in the moving waves of the sea; and, on account of these qualities, raw sienna is the pigment best adapted to represent the reflections of the sky-tones given by yellow ochre. With the addition of a little crimson lake or red, it may be made as available for distant greens as (when pure) for those occurring in the foreground. Having a tendency to be uneven on the paper, it does not work very well.

BURNT SIENNA.

A rich orange russet colour, very transparent and powerful,—qualities which, added to its working with great facility, render it one of the most valuable pigments for giving warmth and vigour to the colour of roads, sand-banks, &c. Combined with indigo, Prussian blue, and any of the transparent yellows, it produces fine greens, varying from a bright citrine to a deep olive.

CADMIUM.

This important addition to the list of yellows is a bright warm colour, approaching to orange. Owing to some irregularity in the mode of preparing this pigment, its colour is not always the same; but it affords the greatest variety to the palette, when differing most from Indian yellow or chrome. It is so luminous, that light tints in the sky, &c., may be given with it without greatly reducing the quantity of light in the picture. It is at present rather expensive; an objection which will probably soon be removed on its becoming more generally employed.

ORANGE CHROME

Is a bright yellow ochre, burnt; by which operation it acquires warmth, colour, and transparency. It has many of the good qualities of yellow ochre, with greater power.

MARS ORANGE.

An artificial ochre of a bright rich orange colour. It is prepared from iron, and should be employed with caution. Perhaps it is not quite so useful as burnt Sienna, from which it may be distinguished by being brighter and clearer in tone.

LIGHT RED.

A preparation of an ochre scarcely to be classed as a red; indeed, all the ochres are broken or indefinite colours. This pigment partakes of the russet orange colour, and is very useful when combined with cobalt or French ultra-marine in forming warm grays for the shadows of clouds.

VERMILION.

This is a brilliant opaque pigment of great body and weight. It varies much in its colour, and in the facility with which it is worked. Being deficient in transparency, and apt to settle away from other pigments, it does not form very useful grays or purples. In light and delicate washes, however, it produces a glowing warmth in skies, without these defects being conspicuous.

ROSE MADDER.

The madder lakes are the most valuable additions made to our palette in modern times; for, besides being permanent, they possess more delicacy than the former lakes. With rose madder we can imitate with great truth the roseate hues in the evening skies; and, by adding a little indigo, may pass from the first blush of a summer's morn to the purple and subdued violet tints of twilight. For the first wash on a pure sky it is preferable to brown madder.

CRIMSON LAKE.

A beautiful transparent red; which, being less expensive, and possessing more power than rose madder, is generally employed in landscapes. Mixed with cobalt or French blue, it makes fine purple tints. By adding it to the greens of the foreground, we convert them into more neutral colours,

suitable either for the middle distance, or the purple gray foliage of such trees as the Scotch fir, &c.

VENETIAN RED.

This is rather a deeper and purer red than light red. Its mixture with cobalt or French blue produces fine purply tints, called by artists grays. When the student has become acquainted with the difference between these two pigments, he should determine which of them he prefers, as the usual moist-colour boxes will not contain both; and the two are unnecessary.

INDIAN RED.

When fine, this is of a purple russet hue and good body. With it and the deeper blues are made great varieties of rich purply tints, much used in stormy skies, or on mountains when under the shadow of dark clouds; but it must be employed with moderation, otherwise it will produce heaviness, and want of air or distance.

PURPLE MADDER

Is not a pure or brilliant purple; but has great richness and transparency, making, with cobalt or French blue, deep purply tints, which are frequently seen in the middle distance when under shadow. For this purpose these tints, being both pure and powerful, are preferred to those made with Indian red.

BROWN MADDER.

This rich russet-coloured pigment is indispensable in water-colour painting. It appears to be the middle hue between orange and purple; and when used in various proportions with yellow ochre, produces a rich warm tint on the white paper, preparing it to receive other colours with an harmonious effect. With gamboge or Indian yellow, in different proportions, it forms fine glowing hues of autumnal foliage.

BROWN PINK.

A vegetable pigment, made from French berries or dye-woods. It is

a rich orange green, much used to form the greens of the foreground. It is easily varied by a small quantity of indigo or transparent yellow.

VANDYKE BROWN.

This is a fine deep transparent colour, used in the warm rich browns of the foreground. When mixed with indigo or French blue, it forms a deep neutral green, very effective in representing the shadows of trees in water. Like the other brown pigments, it does not retire well, but appears constantly near the eye. Brown madder should take its place in the middle distance, or it should be subdued by the more aërial blues.

SEPIA.

This pigment is made from the dark liquor procured from the cuttle-fish, and is of a dusky brown colour. It works well, and being agreeable in colour, is used as the medium for brush-practice. It harmonises well with French blue, with which, and Chinese white, it has been employed on gray paper in the present work. This mode of using it forms an excellent introduction to the use of colours.

PAYNE'S GRAY.

This is one of the numerous preparations of neutral tints supplied by the manufacturers; but it is generally better for the artist to make these combinations for himself. Sometimes, however, as is the case with the present pigment, the colourman's constituents are so well chosen and incorporated, that the result surpasses any thing that can be obtained at the moment by the use either of sepia and indigo or madder and other lakes, combined with indigo or French blue.

IVORY BLACK.

The best black pigment is that which has the most neutral tone and the greatest transparency. Ivory black, when well prepared, possesses these qualities in a high degree. Diluted, it forms pure grays, very useful in skies, distances, &c. As black in full force destroys all appearance of

atmosphere, it is never used in that state for water-colour painting, unless in a single spot on a figure in the foreground.

INDIGO

Is a well-known pigment, made from different species of the indigo-fera and other plants. Though not so bright as Prussian or Antwerp blue, it is more powerful; and being equally transparent, is very useful for forming the rich strong greens of foreground foliage. But, although indigo is so useful, the student should employ it with caution, as greens made with it are apt to appear cold and black. Prussian blue may, in some instances, be substituted for it, and greens suitable for the foreground can also be made with sepia and Indian yellow, or blue black and gamboge.

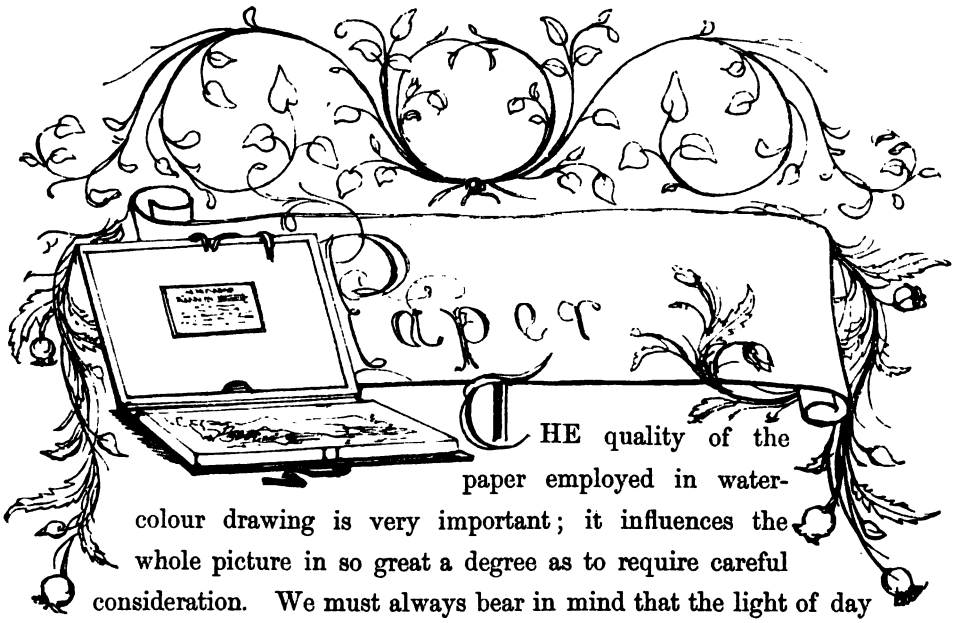
FRENCH BLUE, OR FRENCH ULTRA-MARINE.

A factitious ultra-marine, prepared by Guimet and other manufacturers, at Paris and elsewhere. Some fine specimens were sent from Strasburg to the Exhibition of 1851. Being powerful, and working well, it is, in many cases, a good substitute for the real ultra-marine. It is not considered quite safe to use in oil-painting; but for water-colours, it is supposed to be durable.

COBALT BLUE.

Of all our blue pigments this is the most suitable for skies and distances. It works well, but is rather opaque; and, as now manufactured, possesses almost as much purity and brilliancy as the real ultra-marine. It is deficient in depth; but this does not prevent its employment in the aërial grays of the distance and clouds.

SECTION III.—ON PAPER, TINTED PAPERS, &c.



THE quality of the paper employed in water-colour drawing is very important; it influences the whole picture in so great a degree as to require careful consideration. We must always bear in mind that the light of day is to be represented in our drawing by the white surface of the paper variously modified by transparent washes. This surface, therefore, must be preserved as pure as possible, the forms of the highest lights being left in nearly the same shape as they are intended to be in the finished picture; for when once the light is degraded, we have no power of recovering it with the purity given by the paper in the first instance. In oil-painting, on the contrary, white pigments are employed to represent light; the latter being obtained by gradually painting up from the half lights to those of the highest power; but in water-colour painting the paper itself represents the highest lights; and in those parts of the subject where these are not to remain pure, the surface is toned down by delicate and often-repeated washes.

Paper for water-colours, consequently, should possess some of the qualities of the best white pigments used by the oil-painters. It should be of a pure white, so that the most delicate tints may be used on it without undergoing alteration; and opaque, in order that it may reflect the light falling upon it, without much loss by absorption. The surface should be rather

rough, with a round or convex kind of grain, and free from sharp or angular depressions; the colour being apt to settle in these depressions, and cause spots which cannot be easily removed. Light falls on the varied surface of this description of paper with ever-changing degrees of intensity; and being reflected by it, causes much play and variety in tint on this uneven texture, yet allows the sight to pass, as it were, between the minute portions of colour, and gives them the effect of a pure stippled tint.

A surface that is ribbed, or in lines, is not well adapted to light and delicate drawings, as the lines are likely to interfere with the forms. Thick paper, well sized, is to be preferred. It possesses more body and opacity, and is not liable to blister, or alter with the various tints and washes; it is also less likely to be cut or rubbed through during the different processes. Whatman's drawing-papers are considered the best—the rough imperial, weighing 140 lbs. to the ream, for general purposes, and the extra double elephant and antiquarian for larger works. Artists avoid the use of hot-pressed or fine-grained paper, as the surface does not hold the colour well, or admit of the repeated washings which are sometimes necessary.

The right side of drawing-paper may be ascertained by holding it up to the light, when the maker's name will be seen in its true position; or by bringing it obliquely to the eye, when the surface will be found perfect on the side intended for use. The other side being sometimes scratched by the removal of knots and blemishes from the paper, would take colour very unequally.

It is a frequent mistake with young persons to suppose that, because some artists have used a coarse impure paper with success, it expedites the drawing; for the portions of straw and other impurities, which occur in those parts representing the sky or distance, counteract the effect of the purest tints, and can only be regarded as so many blemishes. Sufficient variety of texture can be obtained on a pure white paper; and if a ground tint be required, it can be laid on of any colour or depth on the pure surface, and thus afford opportunities of obtaining the lights, either by scraping out, or adding with them an opaque white.

It is much to be regretted, that there is not some process by which paper can be dried without hanging the sheets across rods, as this always causes

some difference in the grain at the part touching the rod; and even with the most perfect stretching, the paper is rarely strained flat. The maker's name in the middle of the sheet is also objectionable, for it often becomes visible in the sky or other parts of the finished drawing; it might be placed with advantage in the extreme corner. Since the first edition of this work, Messrs. Whatman have manufactured paper of imperial and double elephant sizes without these defects; they have also lately made a magnificent antiquarian paper, guaranteed by the signature of Messrs. Winsor and Newton, as perfectly pure. We have reason to believe that the best white drawing-papers made by them are as little likely to change as any that can be manufactured.

The usual panelled or clamped drawing-board is generally adopted for large drawings (these should be made by a careful carpenter, with well-seasoned wood and without knots); and the well-known mahogany stretching-board is used for smaller studies. But whatever kind be used, the paper must be well stretched and flat. If it is a large and important work, it should be kept on the board, and be carefully guarded still further from the noxious vapour of gas or bad air, which might penetrate even through fissures, and alter the tones, or deposit dust. To avoid this, the whole back of the board should be carefully covered with thick impervious tin-foil, or a thin sheet of metal, which should be cemented with a proper cement on to the glass, thus effectually excluding the air. The drawing should not touch the glass. To stretch paper well, it should be placed, with the right side upwards, over another sheet of paper upon a table; it should then be wetted with a clean sponge and soft water; and when well soaked, it should be turned, and the operation repeated on the other side. After some time the extra moisture should be removed with a clean cloth, and the board, measuring about two inches less each way, laid on. A square piece being cut out of each corner of the paper, the edges should be carefully glued, turned over, and rubbed down. Common glue is the best cement for the purpose, as with it the paper can be more firmly fixed and tensely stretched than by the use of any other material. The old method of pasting paper on boards is exceedingly dangerous to the colours, as they are apt to be altered by the changes in the paste.

There are solid sketch-books, consisting of a number of sheets of paper compressed together, and glued at the edges. They save much trouble in straining; and by passing a knife beneath the sketch it may be easily removed when completed; but they do not permit much washing and drying, as the edges are easily loosened by water.

When large landscapes are painted, it is sometimes desirable to have considerable difference between the texture of the sky and that of the foreground. To obtain this end, a sheet of moderately fine antiquarian paper is selected, and the subject slightly sketched on it; after which the foreground and middle portion are covered by a sheet of Whatman's coarse paper, called rough double elephant. An outline of some of the most prominent forms is then to be made; taking care to select those which, crossing the subject, present as much irregularity as possible, and are under shadow. The rough paper must be cut with a sharp penknife by this line, and the under edge scraped thin. Both the sheets having been equally wetted, the under side of the rough paper must be carefully covered with thick starch (particular care being taken in applying the starch well on the outline or cut edge), and then placed on the large smooth paper and rubbed down. The compound sheets may now be carefully glued and stretched on the board. The junction of these two qualities of paper should not be allowed to take place in the extreme distance, nor against the sky.

ON THE USE OF TINTED PAPERS.

Paper of various tints and shades has of late years been much employed by artists, both in sketching from nature and in pursuing preliminary studies in chalk of the various effects, particularly those of light and shade, presented in the landscape; these, before commencing the picture, they find it advantageous to make in a broad and simple manner. The advantage of an intermediate tone on the surface of the paper consists in the fact that, as every degree of light and shade, either above or below the tint of the ground, is intentionally added, so every touch of Chinese white, signifying light, must be laid on with a view to enhance the general effect; and thus no patches of light can be left scattered about in a careless unmeaning manner. In this way these papers afford great facilities for the

truthful arrangement of masses of light and shade, on which account they are particularly useful when sketching from nature, with the view of studying the general composition of the picture; but when colour is the object of study, pure white paper supplies the best surface for the purpose: for if the paper inclines to any particular hue, every wash of colour laid on it loses its distinctive character.

There is an abundant choice of tinted papers, from the coldest blue to the warmest orange; but rejecting positive colours, such as blue, yellow, or reddish browns, let the student select the more pleasing tints presented either by some of the neutral hues, or tertiary compounds, such as light russets, and delicate aerial grays, inclining to purple rather than green (which quality of tone is decidedly prejudicial in the skies), or by the warmer tints produced with various proportions of yellow ochre and brown madder. The particular tint or shade employed should be selected with reference to the auxiliary power it may give the sketch in conveying the impression, either of warmth or coolness, produced on the eye by the natural scene; this impression being best assisted by a bold and rapid touch. Studies of this kind are generally made with materials the most easily manipulated, and sketches thus taken remain unaltered as reminiscences of the truth of nature, standards with which to compare combinations of form, light and shade, and colour, as progress is made towards one harmonious whole in the finished picture. In these sketches the end is not attained by covering the whole surface of the paper, either with the white pigment or the black chalk, but only by using them respectively to represent the stronger lights and shadows, leaving much of the paper between these two extremes untouched; for as the larger portion of every subject consists of middle tint, that of the paper gives an appearance of solidity and reality to the slightest sketch. Before commencing his study, the student should ascertain the direction of the light, and, the portion of the sky surrounding the sun being, of course, the lightest, he should pay particular attention to the position of that luminary. As a general rule, it will be found that all parts of the sky and clouds are lighter in tone than objects on the earth, as mountains, trees, rocks, &c.; the local or natural colour of buildings or parts of figures, however, being contrasted

with the darker objects surrounding them, must be represented even lighter than the lights of the sky. The subject once sketched in, a general tint of white with cobalt and crimson lake may be given with rather a drier brush than is used in laying on a wash of transparent water-colours; the addition of white allowing the brush to be passed to and fro in any direction, renders it comparatively easy to lay this tint perfectly even. It is important to observe that, although this tint in any quantity appears nearly opaque, yet it must be laid on so lightly as to become semi-transparent, permitting the colour of the paper to appear through it, and thus influencing the general tone, producing an effect similar to that of scumbling in oil-painting; applying it too thickly destroys the appearance of atmosphere and causes it to lose its transparency: this first tint applied, others composed of warmer colours and white may follow, until at last the highest lights are put on thick and opaque. Body colour is an important element in this style of drawing, as it increases the appearance of light, while, on the contrary, repeated washes of transparent colour darken the tone. Trees and other objects, the local or natural colour of which is dark, should not have this lighter tint added, but the portion of the paper occupied by their forms should be slightly sketched out, and then left untouched; however, as objects in nature are seldom equally relieved in all parts of their outline, these light tints should not be placed with equal force all round the lines delineating such objects, as this would give them the unnatural appearance of being cut out. The general effect being gained, the sky surrounding the objects crossing it should be left undefined, unless it be desirable to make one more conspicuous than the others, when the strongest light may be brought into contrast with this object. A very agreeable effect is sometimes given by showing light clouds behind the stems or branches of trees; but this must not be often repeated; as if so, it becomes unnatural and tricky. Chinese white in a pure state is rarely used even on the brightest object; to give it a sunlight appearance a little warm colour should be added. Raw Sienna, having a rich sunny character, is very suitable for this purpose. The mode of adding the lights in the foreground can be slightly varied by using the pigment rather drier and more opaque, and by dragging the brush, charged with it, over the surface, so as to leave it unequal; thus increasing

DUGARRY, ARRAN

the effect of roughness and variety in the texture. Lights on those parts of old stone buildings, rocks, &c., which have the sunlight strong upon them, or come against the edge or shadow, may be painted with fulness and decision, and afterwards softened by the process of dragging the brush sideways, or partly removed with a sharp knife. The more delicate forms of clouds or tones in the sky may, in like manner, be softened or subdued by rubbing bread. When only a slight modification of the tint of the paper is required, and a little increase of tone not objectionable, a wash of some warm colour without the white may be passed over the part to be altered; but this should be done with caution, so that its influence may scarcely be perceived.

Used in the way above indicated, tinted papers are of great service to the artist, who, however, while having recourse to them, must be careful to guard against the abuse of colours in this form of practice. As a general rule, white (however well tempered or modified) should be applied with moderation, and never on any part of an object in shadow; even though that object may be white and subject to strong reflection, it must be strictly reserved for objects light in colour when illuminated by the sun. It may be well to mention, that if the student uses the brush and colours he should select tinted paper that is well sized, the grain or surface not being in this case so important; but if he uses chalk, he should choose paper which is not only sized, but smooth, thick, and equal in texture; such are to be found without being hot-pressed. If harsh rough-grained paper is chosen, it will be found, when used in the sun, much too coarse, although, by the side of falling water, or in the damp of the evening, it becomes softer. Some tints have a tendency to change their colour by time or exposure to gases, and this may be detected by referring to one of the small books of patterns which has been exposed to these influences. Chalk drawings made with these materials can be readily fixed by passing them through a weak solution of gum arabic and hot water, in the proportion of about half an ounce to a pint; they are afterwards hung up to dry, and the lower end touched with a soft cloth to take off the superfluous water. For an example of this style of drawing the student is referred to Plate V., a slight sketch made in the north of Arran, near Loch Ranza. Those who may happen to

see two copies of this edition will perceive that, for the sake of variety, it has been treated in two different ways,—morning and evening; in one, the brightest and most attractive light has been placed on the stones of the old bridge in the foreground, and this is made still more interesting by a group of figures; in the other, a single figure, as before, stands upon the bridge, which is now in shadow from some passing cloud. This shadow may be indicated by a hasty wash of colour harmonising with the tint of the paper, not attracting attention as colour, but merely bringing the effect to a focus by increase of strength; in this case only a few strokes or touches with the chalk are added to prevent it looking cold or vapid. In the first, the group has been somewhat increased in interest, so that the view might, if desirable, have been called by a different title, such as would direct the attention more to the immediate foreground—thus, "The long wished-for arrival." The reader will understand this much better by recollecting some picture of Collins, or Hooks, in which the chief interest is placed on the group in the foreground, but intimately connected with the distance, either by the position or action of the figures.

Should the student not find any tinted papers to suit his taste, we recommend him to make them for himself, using good white paper well stretched. This is good practice in laying large flat washes; and to do it well, the paper must be damped either at the back or on the face, and while still damp the wash may be floated on with a large brush. The tone may be slightly gradated in strength, from the sky to the foreground, or from one side to the other, to suit the subject, but it is as well not to attempt much alteration in colour. On tints thus prepared one can readily take out lights, either sharp and decided, with the scraper or knife, or by the usual process of wetting and rubbing out.

Notwithstanding the great advantages that this style of drawing affords for the purpose of rapid sketching, and the study of light and shade, the student in colour is strongly recommended to make all his studies from nature, and the copies of plates and diagrams from this work on pure white paper; for it has been observed that those who continually use the pencil or chalk and tinted papers are in great danger of having their eye vitiated by the conventional colour of the paper; even a slight monotonous warm tone

is, in the author's opinion, exceedingly prejudicial to a true appreciation of the different delicate and continually gradating tones we find in nature. We are all far too easily satisfied with an artificially coloured medium, and soon learn to look upon tints inclosed by an outline as natural colours, whereas they can be but approximations to the general tone, and are frequently quite unlike the local colour of many of the objects. If this style is carried on too long, the judgment, and even the perception, of the student become warped, and his future studies in true colouring made more difficult. If one faculty is over-cultivated, it is often at the expense of others; and thoughts and ideas being conveyed with more facility by that means, we naturally fly to it on every occasion. Thus, if a pupil is kept too long to outline or form, he perceives it at the expense of light and shade and colour. Again, there are well-known instances in which artists are such devoted admirers of colour, that form and chiaroscuro are totally wanting in their works, and wherever we see them we have only to admire the exquisite refinement of some portion of colour,—a beautiful warm gray in clouds, indicative of rain,—a rich and mellow green,—or a combination of colour of extraordinary beauty, but exceedingly artificial, and therefore very fatiguing to the eye when often repeated. Let each power be trained in due order; the perception and imitation of form first, then light and shade, and lastly colour, the chief subject of this work; and our student, being supposed to have already passed through the first studies, the brief notes on these papers, with composition, light and shade, &c., are only introduced to remind him of their importance; but we advise him now to give his principal attention to the study of nature with the brush and colour on white paper.

Before concluding these notes on tinted papers, it must be remarked that glazed boards with printed graduated tints of bright blue for the sky, passing into red or yellow for the foreground, and on which the lights must be scraped out, are in bad taste, producing effects unlike any in nature. Those attempting the appearance of a sunset, even supposing the colours well arranged and true, are only adapted to represent one particular effect and one description of view, as of a level country, or a barren sandy common; a sea-shore is quite out of the question, for the sea is neither

yellow nor red. Again, when a tree or a building rises into the sky, it is necessary to alter the tone in that part (a most difficult operation by scraping), or the object would be blue. These preparations of glaring and false colours attract only the uneducated, and drawings made on their manufactured skies and bright coloured foregrounds may, with respect to art, be classed with embossed coloured representations of animals and fruit, or with papier-maché tea-boards, having pieces of mother-of-pearl inserted to represent the lights of the landscape. The use of all such adventitious aids is not merely a waste of time, it is a complete barrier to the advance of truth of colouring. Under this impression, the author considers it his duty, as one engaged in the art-education of youth, to condemn the practice in the strongest terms.

BRUSHES.

Fine brown sable brushes of the round form are best for general use; they should always be regular or domed in their shape, and in all the best sable brushes this regularity is produced by placing the hair with the greatest care, and not by grinding the point; they should not be so long and flat at the sides as to be weak, but with the hair so arranged that they return to a fair point even without water. In choosing brushes most artists try the strength, spring, or resistance of the hair, and observe whether it is irregular in the curve while dry; afterwards, with water, some hair, such as the red sable, has much more resistance in it, but does not allow so much facility in working; this kind comes between the brown sable and the hog-hair, so much used in oil. These are more useful in dragging or making separated touches than in laying on washes. All brushes, whether round or flat, should return to their original shape after every touch or wash. Care should be taken not to leave them in water, or allow them to dry charged with colour or white. A small strong India-rubber ring is useful to hold two or more together, that their points, being turned in, may not be injured when shaken against the end of the chalk-box. One or two of these rounded forms are sufficient for the young artist's first practice; but they should be large, as, by using a large brush, he acquires freedom of hand. When he can thoroughly command this kind,

and he desires greater variety of touch or texture, he will find brushes of all shapes and length of hair at the artists' colourmen. Some are made flat, and with the hair arranged so as to separate easily into hairy strokes or touches supposed to represent the leaves of trees or grass. For this purpose, as well as rubbing in the first tints of trees or the tints of firm studies, the usual hog-hair brush is useful; for if a gummy vehicle is used, it allows the colour to be spread with more regularity. A flat camel-hair brush, about an inch and a half wide, is necessary for the skies and first tints in large works; a round camel-hair brush is also used for the same purpose; these holding a plentiful supply of colour, facilitate the laying on of broad tints evenly. They are also useful in softening those tints which are too heavy.

Brushes should not be put into the mouth to point them, but if necessary they may be drawn on a soft cloth to discharge the superabundant moisture, and they may thus be formed into the desired shape.

For those who wish for less expensive brushes, the Siberian, or dyed hair, are found to have most of the necessary qualifications. As sable brushes are costly, and are soon worn out, the young artist may economise them by care; using, for instance, a broad camel-hair brush to lay on the first washes, for in covering large surfaces of rough paper the delicate brush is much worn and driven out of shape. An old sable, the point of which may be too much worn for precise touches, ought to be used for washing over skies or broad tints, or when the brush is worked upwards and into the grain of the paper to get rid of inequalities. Above all, the sable brush used for pure water-colour drawing with transparent pigments, should never be filled with opaque white for drawing on tinted or other papers.

Although we are desirous to mention all the appliances that ingenious workmen present to the followers of dexterous execution, we may caution the young student in placing too much reliance on any of his materials for the chief beauty of his works; let him try, of course, to gain a mastery over his instruments, and ascertain those that aid him best to express his ideas, but he must not allow his attention to be too much engrossed with these minor points, for he may be in danger of becoming a mere mannerist, without any of the higher thoughts of an artist about him. It would not be difficult, but might be invidious, to point out works in our galleries where

the artists are indebted for their chief attraction to a peculiar paper, either in texture or tint; others are fascinated by extraordinary brushes, producing a wiry, hairy, or mossy touch; while some, running to the other extreme, dab on great masses of colour with a large round brush. He will do well, therefore, after learning to express his ideas with facility, to avoid using any material or instrument that is likely to lead him away from the simplicity united to variety that he finds in nature.

VEHICLES AND MEDIUMS.

Before we conclude this chapter on the materials employed by the water-colour painter, we must add a few words on the use of the vehicles or mediums by which pigments are conveyed to the paper. While water-colours were used merely for the purpose of washing in a hasty effect or taking a memorandum of the colours seen in nature, it would matter little what pigments or vehicles were employed. The backs of letters, brushes made of the commonest hair, and water from the next source, were quite sufficient for these hasty memoranda; but now that painting, done in this mode, occupies the whole attention and talents of some of our greatest artists, we must scrupulously examine every material that they employ, that we may adopt at once, from the beginning of our studies, the safest and most eligible means to convey our ideas, and secure the durability of our labour. It is notorious to all that the vehicles and mediums employed in oil-painting are the source of greater changes in the colours and effects than even the pigments themselves; therefore in such comparatively simple compounds as the water-colour painter uses we should hardly have expected any observations necessary; but as the mode of operation is enlarged, and every endeavour used to assimilate it in power to oil-painting, we ought to see that we employ perfectly safe materials. Vehicle, a term borrowed from pharmacy, signifies that material which is employed in painting to distribute, to combine, and secure the colours forming the representation of nature. There is no doubt that the colours of pigments are greatly affected by the substances that are held in solution by the vehicles we employ; and even water, the simplest of all these, should be pure; it should be distilled or rain-water.

Field says, "In all hard and impure waters, colours are disposed to separate and curdle, so that it is often impossible a clear flowing wash, or gradation of colour, should be obtained with them. Solution of gums, ox-gall, &c. correct, without entirely overcoming, these defects of the water; but they are often inconvenient, if not injurious." Of all the gums, senegal is the strongest. Tragacanth appears, from its gelatinous texture, to preserve the touch of the pencil, and prevent the flowing of some colours; but gum arabic is the best adapted for general use with water-colours, as it does not degrade the more delicate pigments, and yet bears out the colours well: it should be picked, dissolved in cold water, and strained; and either used fresh, or preserved by the addition of a small portion of carbonate of ammonia, which should be incorporated with it—one scruple of the powdered carbonate to an ounce of the gum, dissolved by maceration in two or three ounces of cold water. Isinglass mixed with gum is also much used in water-colour painting; it is thick, and looks like the megilp used in oil-painting. There is also another vehicle for enhancing and strengthening colours; it is a solution of borax in water and gum tragacanth. This, Mr. Hammon Jones (who has received from the Society of Arts a medal for the discovery) found dried sufficiently firm to allow tints to be repeatedly laid one over another without moving or washing up. We must add, borax is, however, said to affect vegetable colours.

White of egg is also employed to mix with colours; it causes them to blend more agreeably and evenly on the paper, and adds to the brilliancy of their appearance; the pigments also retain their moisture longer, and allow of the longer working. It is very important to have a vehicle that permits of a variety of handling, and taking out before it dries or hardens, but the young student must use all such vehicles with caution and sparingly, otherwise they may crack and peel off. In this semi-firm state many forms may be scratched out with a knife or the end of a pencil-stick, and thus a variety given to the touch, preventing it from looking so mechanical. The yolk of eggs is also used as a stopping-out liquid: the lights that are to be left are stopped out with this previous to laying on the flat washes to blots of colour. When these touches are well dried, the colour is blotted on, and does not disturb them. The lights are regained

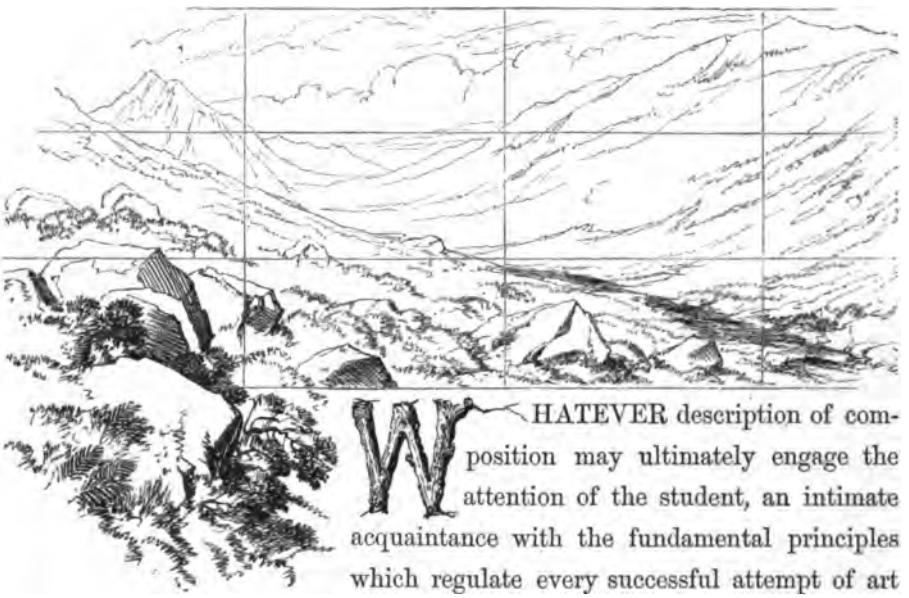
by rubbing with bread or India-rubber; it is most used for foliage and the sharp lights in the foreground.

Should the colours or washes not be evenly laid on, or attach themselves to, the paper, a little gall may be dissolved in the water: a small piece about the size of a pea, dropped in the glass of water, or a few drops of the solution, will be sufficient. The young amateur should be warned not to use honey or sugar with his cake colours to make them moist, both attracting flies or other insects, and also damp. It is better to use the pigments in as pure a state as possible, either in powder ground into a little gum arabic, in cake, or moist, prepared by the best manufacturer: perhaps a little glicerine is as simple as anything to add to the pigments to keep them moist. In conclusion, let us keep in mind that the purer the pigments can be laid on the paper, the better, with just so much vehicle that they will attach themselves well, but not so much that they will crack or peel off: in general, it will be found that all the light and delicate washes and tints will want nothing more than the gum they are manufactured with. In the darker tints or glazings we may use with discretion the other vehicles that are mentioned, keeping in mind that gums generally do not facilitate the spreading of colour, but should rather be reserved for enhancing the rich deep tones of the foreground.

CHAPTER III.

ON ELEMENTARY PRACTICE.

SECTION I.—ON COMPOSITION.



WHATEVER description of composition may ultimately engage the attention of the student, an intimate acquaintance with the fundamental principles which regulate every successful attempt of art in imitating nature, must be of the first importance. Consequently, before he approaches the more attractive and ornamental art of colouring, these principles, and the rules deduced from them, which are the only sure foundation of future progress, must be firmly impressed upon his mind. Any attempt to please by a picture which, though possessing the most harmonious arrangement of charming tints, is defective in regard to the choice of objects, in lines misplaced, or faulty in perspective, would be utterly vain and fruitless. Errors like these would undoubtedly offend both the eye and taste of an intelligent observer; and that too in such a degree that any praise he might bestow upon the beauty of the colouring, would be accompanied by the regret that powers, capable of so much in one branch of the

art, should yet be so deficient in those on which all truthful representation depends.

Colour, the author is compelled to acknowledge, even in a work devoted like the present to its especial consideration, is subordinate to form and light and shade; for, although more attractive, it is, in the representation of nature, the least important of the three.

In studying from nature, the student, in the first instance, would do well to consider colour as so much light and shade, giving to the different hues that portion of shade to which they are equivalent. Truthfulness in form and light must predominate. This object being effected, representations in colour may be given with great effect, even in an engraving, in which the tones are all neutral. Colour, however, adds a most powerful charm to all works of landscape art, and greatly assists in elucidating the beauties of nature.

In a work of this description it is not requisite to enter fully into the consideration of composition; since it may be presumed that those who consult these pages have already made some advances in the practice of drawing, and received that education of the eye, and that training of the hand, which are calculated to render students capable of imitating the forms presented to their view. For this reason, it will suffice to notice only some of the most important points connected with the choice of a subject and the composition of a picture.

As in poetry, no poem, however beautiful its imagery, can be deemed perfect without some peculiar thought or sentiment prevailing throughout; so in painting, no picture, how brilliant soever its colouring, will excite any pleasurable emotion in the mind of the spectator, unless some predominant idea, or intention, pervades the whole.

Composition is the art of arranging the forms or objects that constitute a picture. In a higher sense, it may be considered as the study necessary in choosing a subject for representation, and deciding the point of view best adapted to render it effective. In either case, that leading idea and unity of purpose, so essential both to the poem and the picture, must be strictly observed.

In Landscape Painting, the picture may be described as being that portion of nature visible at one time, and from one spot. Neither the head nor the eye should be moved; any such change giving more than can be taken

in at one moment, and so presenting a picture of the panoramic class. The artist must be content to limit his view of the subject immediately before him to a space occupying about 60° of the circle.

This being understood, the artist may proceed to consider what objects within that view are most suitable for representation; being guided in this respect by the rules adapted to aid him in the selection. The choice having been made, his next care must be, bearing in mind the former remark, to guard against any wandering either of the eye or the thoughts to other parts of the landscape.

While studying perspective, the pupil will have learnt to consider the paper, on which he is to trace the outline of the scene before him, as a transparent medium between himself and the object. Suppose, instead of a transparent medium, he holds up his sketching-folio at a moderate arm's length between his eye and the view; it will hide just so much of the latter as his paper will contain. Should he require more of one object than of another, he can move the folio in any direction, until it covers all such parts as he wishes to include in his picture. When its distance from the eye equals its length, the folio will hide nearly as much space as the eye can embrace without difficulty. The distance is regulated by the principles of perspective; and, if increased, the height and width of the picture must be increased in proportion, or a smaller portion of the landscape will be included. It will, however, be shown, in a future page, that this rule admits of exceptions.

Another point, in the arrangement of a picture, is, that the person looking at it should be made to feel as if he were placed in the position of the artist when sketching the view. To accomplish this, the lines must be represented so truthfully, that the objects on the flat surface of the paper may appear to be at the same relative distances from the eye at which the real objects were seen. This being skilfully done, it will at once be evident whether the sketch was taken from high or low ground, or whether more of the subject was to the right or to the left of the spectator. To assist in arriving at this result, the frame of the sketching-folio may be held up in a vertical position, so as to form the boundary-lines on the top, the base, and the two sides of the intended picture. In this position the artist will find

the perpendicular and horizontal lines supplied by the frame extremely useful; as he may, from time to time, compare with them the lines of his progressing subject.

The first studies of composition should be faithful transcripts of the lines, as they appear in nature. Subjects having simple forms should be selected, and from these no deviation should be permitted. A firm and perhaps severe style will be the result. By this practice the mind becomes stored with images so clear and distinct as never to be forgotten.

Should the student, when more advanced, find the position which he has chosen deficient in any particular point, he will then have the power to recall forms previously studied, and which may be more suitable to the view he is representing; or he may change his position, until he perceives that the arrangement of the lines is agreeable. He should, however, place some restraint upon himself, in introducing too great a variety; as continual change, whether it be in outline, light and shade, or colour, produces satiety, and fatigues the attention,—simplicity of parts and lines being at all times necessary to produce repose.

After a little practice in composition, the student will become aware that lines, receding from the forepart or base line of the picture, assist the perspective, and induce a true estimation of the distance of the objects; while those parallel to it only conduct the eye from side to side. A position, therefore, if possible, should be chosen, so as to avoid these parallel lines; for the mind being unconsciously influenced by the direction of the lines in a picture, a road, a path, or a river, may serve to increase the interest, by conducting the eye into space, and directing the attention towards the distance, or special points of the subject. (Fig. 1.)

Fig. 1.

Any position in which the ruts of a road rise perpendicularly from the base line, should be changed for one that presents them inclining either to the right or the left,—the former creating a difficulty without any compensating advantage.

By this selection of station, great alteration may be made in the disposition of the quantities or proportions which the different parts of the subject bear to each other. In Fig. 1, a few steps to the right would have caused the lines in the road to have presented the difficulty pointed out above. In another position the summit of the mountain would have been placed exactly in the centre of the distant opening. By this careful consideration, the lines of either the cliffs or hills may be prevented from appearing parallel to each other, or to the side lines of the picture. In the same way the termination of promontories may be varied so as not to appear exactly under one another,—an error of position to be avoided.

In Fig. 1, the angular forms of the mountain are contrasted with the straight line of the lake; and the rounded forms of the clouds and woods make an agreeable variety with the more severe lines of the rocks. In selecting the station, it must be remarked that the least difference of position causes a change of form in the nearest parts or foreground; but to produce any alteration in the shapes of the distant mountains, it will be necessary to remove to a considerable distance from the position previously selected.

An instance of the use made of lines, in directing the attention to the chief point of interest, may be deduced from the celebrated picture of the Last Supper, by Leonardo Da Vinci, where the beams of the ceiling, the boards of the floor, and even the folds of the table-cloth, all lead the eye towards the head of the Saviour.

Fig. 2.

A balance of the interest does not necessarily mean that equal quantities of the subject should be placed on each side of the picture. A great preponderance may exist on one side, and yet be sufficiently balanced on the other by a group of figures, by light and shade, or even by a broad glow of colour, as in a brilliant sunset. Other effects will form a subject for future consideration. The above are here introduced, in order that the student, while arranging the lines of his picture, may bear them in mind in connexion with the other important precepts of the art; not thinking, however, that form only can balance form, or colour balance colour. Neither is it essential that the principal points of interest should be in the centre of the whole picture; for instance, should a group of figures divide the interest with the rest of the subject, it may be placed at the side (vide Fig. 3—A Party of Pleasure). The figures here doubtless form the chief point of interest; but the distant spot to which they are bound being dimly depicted through the rain, serves to indicate the disappointment of the party; while the idea is further assisted by the introduction of the dog, evidently dragged unwillingly along, and looking back with regret towards the warm chimney-nook he has left behind.

Fig. 3. A PARTY OF PLEASURE.—ARRAN.

In all these cases the student must recollect that one attractive element may successfully balance another of a different character; and so, without undue formality, preserve the general harmony of the composition. (Figs. 2 and 3.)

The line which has the most influence on the direction of all the others in the picture is the horizon or horizontal line. This is easily distinguished,

either when the spectator is standing on the sea-shore, or on a level country; but even when not seen, as in a mountainous view, or close wood, it must still be indicated in the drawing by a line parallel to the base, and extending from side to side of the picture. This horizontal line varies with the position chosen, and should always indicate the height of the eye of the painter, or indeed of the eye of any person looking at the picture; its place must therefore be determined at the very commencement of a drawing. It is generally situated at such a distance from the base-line as equals about one-third of the height of the picture; thus allowing one-third land and two-thirds sky; but when the view is taken from the sea-beach, or the objects are intended to be much above the eye, it is better placed at only a fourth or fifth of this distance above the base. On the contrary, should the view be taken from an eminence, the horizontal line will rise with the change, and be nearer the top than the base. As the other lines of the picture are more pleasing, and the whole more agreeable when there are unequal, rather than equal, spaces above and below this line, it should never divide the subject exactly in the middle. For similar reasons, the point of sight (always being, as the student is aware, opposite the eye, on the horizontal line) should be placed more or less either to the right or to the left of the centre; as, by thus presenting more of the subject on one side than the other, we avoid formality, and advantageously change the angles of the general lines.

In regard to distance, only one portion of a landscape is in a proper position to be seen distinctly at one time; for, unconsciously to ourselves, the focus is altered every time we look at objects at different distances. This change, with its consequences, is most important when occurring in the space between the immediate foreground and the middle distance. Beyond that distance, the change, though continually taking place, is less apparent. However, as all the objects represented in a picture are placed at the same actual distance from the eye, we should select such a spot in the natural view as we desire to render most attractive in the drawing; then, assuming that particular spot to be our focus, the other parts should be rendered less and less apparent by being less finished in proportion as their distance from that point increases. In this way, the eye being led to dwell with the

greatest interest on the most important point, the impression made by the whole will, as nearly as possible, resemble that produced by the corresponding view of nature. The extreme boundaries of all objects become indistinct when seen at a distance; angular and square objects losing their corners, and taking a round or oval form. In like manner, the angles of our squared pictures or views become less distinctly evident; and by these means the eye is in some degree confined to the imaginary oval form contained within the boundary of the outline. This natural effect the artist imitates by arranging the principal objects within an oval space; at the same time aiding the general result by so disposing and modifying the lines as not only to keep the eye from wandering out of the picture, but also to concentrate the attention on the object intended to represent the chief point of interest. At other times he varies the oval form according to the subject he has to portray; but whatever form he may adopt, simplicity in arranging points of interest should be his chief aim, and no doubt or hesitation ought to be felt in the mind of the spectator as to which is the principal object of the picture. With this view, he will arrange such parts of his subject as are at his disposal so as to keep up the interest of the whole. Some parts of the picture are so evidently well suited for any object of attraction, that they are sometimes called the strong points of a picture, such as the group occupies in Fig. 2, p. 79.

The well-known painting of "Bolton Abbey," by Landseer, offers a striking example of the dexterity with which this is sometimes accomplished. Here the oval form, without any apparent effort, is so skilfully preserved within the squared boundary-lines of the picture, that the eye is, as it were, fastened on the principal object. This beautiful effect is attained by the artistic arrangement of the accessories, the heads of the figures, the game, dogs, and even a censer with smoke rising from it; in another part, with the same view, a little extra finish has been given to the details of a bracket, and the whole aided by a gradual increase or diminution of light and shade.

While considering the position of the principal points of interest, we must observe that one object should never be placed over another, when that other is of equal size or effect; as this, by dividing the interest would destroy the power of both, and render it difficult, even with the utmost

attention to aërial perspective, to give a true position to the chief object. This, however, does not refer to reflections of objects in water, which, when skilfully used, greatly add to their altitude and beauty; nor should it prevent the artistic distribution of figures or other objects at the base of a building or tree;—these may likewise answer the same purpose. Neither should two objects of the same size and interest be so placed as to appear one on each side of some middle object. One must be rendered subservient to the other; otherwise two points of view will be produced, dividing the interest, and deteriorating the effect. (Vide Fig. 4.)

Fig. 4.

When it is desired to render some particular object important, it is made to occupy more of the whole space of the picture than other objects which form parts of it; or, by leaving the rest of the subject less defined, it gains in interest by being more finished. Thus the portrait-painter, if he wishes to give a small person the same importance as one of a larger size, makes the canvas smaller, and causes the head to rise nearly to the top of it, while the feet are placed near the bottom; or some accidental circumstance—such as a step, a bank, or any higher ground—may be taken advantage of to elevate the figure to a more commanding position. When the contrary effect is wished, other objects are made more important; and of course these results are much assisted by a knowledge of the effects of chiaroscuro and the use of colour. Importance is also given to any object by a repetition of the form or colour, but always in a smaller or fainter degree. Thus, in the retreating columns of a building, the eye and mind are gradually impressed with the idea of the largeness of the column in the immediate foreground. Again, in an avenue of trees, it greatly increases the apparent altitude to see others the same in size as those in the foreground reduced by distance,

to so small a space; and the attention, when recalled to the principal object near at hand, is proportionately augmented. Thus clouds that are immediately overhead may have additional interest given to them by others which may be said to echo their shape and colour; and in some cases these delicate forms of clouds are useful in repeating, and, as it were, carrying on the shape of distant mountains or promontories. We may perceive by these few notes, that very delicate repetitions impress the eye with as much power as single forms when presented with greater firmness; and by varying our means of producing effect, we greatly enlarge our minds, and avoid monotony and mannerism in our works.

The proportions of pictures may vary with the general forms of the objects selected, but they should never be exactly square. The effect of height in lofty objects, as a near view of a cathedral-tower or a mountain-peak, is often aided by an upright form; but its height should be evidently more than its width. At other times a long shape may be desirable, as for delineating the mere summit of a mountain-range or rocky scene. (See example at the head of this section.)

There is yet another way in which we give, as it were, a glance at some single beauty of nature, leaving the rest of the scene to be imagined. Fragments so selected, and left unfinished or undefined at their boundaries, are called vignettes. Originally they were nothing more than ornamental arrangements of a few vine-leaves and flowers at the head of a title-page, or at the end of a division of a book; but, at the present time, any delineation left in this indefinite state is so named; and being no longer confined to those particular parts of the page, its place is left to the discretion of the author. The unassuming style of these compositions, and the great latitude they allow in form, has caused them to be much employed in the enrichment or illustration of books. When executed in wood, they can, without adding materially to the expense, be printed at the same time with the letterpress. In this manner—as will be shown in this and other sections of the work—any interesting object (as a rustic bridge, or an opening through trees showing a distant spire) may be given, and all the intricacy and labour of drawing the numerous surrounding objects avoided. Some of Bewick's small vignettes are so pointed in character, and so full of

expression, that they even surpass the more finished plates of his work. The vignette style has been adopted for the accompanying little sketch, and also in the woodcut at p. 33.

VIGNETTE.

Referring to the above varieties, it is evident that, although general rules have been laid down for the guidance of the student in choosing the shape best adapted to the composition of landscape-scenes, much latitude is allowed in this respect; for example, a space, the proportions of which are three by two, embracing within the oval contained in it all the principal features, is indicated as the form most suited for ordinary use in landscape-painting; but others (as the upright or the long horizontal shapes) may occasionally be employed, and that too with great advantage. In all cases, however, it is essential that the artist should in the first instance decide upon the proportions he intends to adopt; and then, aided by the rules derived from experience, proceed to work out his intention.

The author must be pardoned if in this place he pauses for a moment to dwell on the high and varied qualifications necessary to form an accomplished artist. The mind, to enable it to direct the eye and guide the hand, must be stored with a great diversity of information. In addition to all that is peculiar to his own pursuits, the artist, to give his figures their true form under every change of posture, must have some knowledge of anatomy; for drapery, however flowing and graceful it may appear, will not always avail in concealing inaccurate drawing of the figure or limbs. To represent rocks and mountains in their natural position, with their proper characteristics (whether their masses are exposed to view in naked majesty, or partially hidden beneath a wintry robe of snow, or the summer mantle of vegetation), the artist must understand something of their

geological structure and formation. From the science of optics he must learn to comprehend the laws affecting the light by which he works, which illuminates his subject, and by which his pigments are so materially affected. From a knowledge of chemistry he must acquire the power of selecting those substances, both natural and artificial, best suited to his purpose in the composition of the pigments requisite to produce his intended effects. And finally, to profit by the experience and labours of those who in former generations have trodden the path before him, he must seek the record of their trials, their failures, and their triumphs.

Hence, to excel in the art of painting requires the attainment of many collateral branches of knowledge, which demand the exercise of much patient industry. This, however, is amply compensated by the power and pleasure it bestows, the enviable capacity of faithfully imitating nature in her loveliest forms, the exquisite delight of fully appreciating her ever-varying beauties,—enjoyment far, very far, beyond the reach of the uneducated mind. Alison, in his *Essay on Taste*, says, "The beauty of any scene in nature is seldom so striking to others as it is to a landscape-painter." Following his train of thought, we may add, that to the painter, rendered familiar by his profession with the difficulties both of invention and execution, the profusion with which nature often scatters her most picturesque beauties appears little less than miraculous. Every minute circumstance of form and perspective, of light and shade, passing unheeded by the vulgar gaze, assumes in his eyes an importance commensurate with the difficulty it involves. These ideas of difficulty, and the power of overcoming it, being commingled in his mind, produce an emotion incomparably more intense than any that can possibly be derived by the generality of mankind from the same source.

SECTION II.

—a term introduced into our language as a translation of the Italian word chiaroscuro (clear-obscure)—being now universally adopted by all artists, amateurs, and writers, it is necessary to give the student, in as simple a manner as possible, an explanation of its meaning. This term is very comprehensive; for it not only includes the simple and natural light and shade belonging to every object when illuminated by the sun, with the shadows projected from it, but likewise the arrangement of the various masses of lights and shadows, whether belonging to the different bodies represented in the picture, or to others which, though not visible, are supposed by their intervention to influence its general effect. It should be well understood that objects with merely the light and shade appertaining to them, taken singly, will not form pictures. In order to possess any pictorial effect, they must be accompanied either by other forms or by accidental lights and shades. Now, as in art a selection is made from nature, according to the degree of taste and ability possessed by the artist, it is of the first importance that he should early attain the power of examining natural scenes,

with a view of representing those lights and shades calculated to express the sentiment he wishes to convey; and as, in his previous attempts in the choice or arrangement of lines or forms, he has doubtless found the advantage of adopting some well-digested system of study embracing the experience of ages, so, in the further prosecution of his labours, will he find that a like system, tending to direct him in a judicious selection of the lights and shades of nature will greatly facilitate the acquisition of a just knowledge of pictorial effect. The student is not to imagine that, in a treatise intended to assist him in the use of colour, it is unnecessary to enter into the study of light and shade; on the contrary—as we have stated in Section I., "On Composition"—the effort necessary to overcome these difficulties in their relative order will greatly conduce to his ultimate success; for though the study of outline or form cannot be easily separated from that of light and shade,—the former being scarcely intelligible to the eye without the aid of the latter,—yet the attainment of these two divisions of the art is essential before resorting to colour. In proof of which, we have only to examine the exquisite productions of recent photographers; in these we see what perfect representations of nature, in every thing but colour, are the result of tints and shades devoid of that great charm. It must, however, be confessed that, even in the most perfect of these philosophical productions, a certain amount of pictorial effect is wanting, and a deficiency is felt of that concentration of interest caused by a more artistic application of the rules of chiaroscuro. The great use of photography to the artist is to supply accurate copies of portions of nature, or faithful transcripts of those effects which he has in the first instance studied from nature; in this way, it may be made to assist him by securing for his use the most correct representations of form and light and shade, while it is indebted to him for the more enlarged arrangement of lights and shadows known by the comprehensive appellation of chiaroscuro.

As an additional inducement to the student to defer the practice of colour until he has mastered the difficulties of light and shade, it may be remarked, that for many years Turner rarely used any positive colour in his paintings, trusting entirely to neutral tints for his representation of the glorious effects of nature. A still more convincing proof of the advantages

of such an order of procedure may be found in the fact, that, as the sun declines, the colour of all objects is obscured, and light and shade alone are visible. Thus, the groundwork being laid, and the true principle of chiaroscuro once thoroughly understood, colour may be employed with great ease and rapidity.

Light, whether emitted from a luminous body or reflected with diminished force from the various opaque bodies around us, is the sole agent in producing impressions on the mind through the organ of sight. Its effect being almost instantaneous, the light portions of objects should, in art as in nature, first attract the attention; after these, perhaps, the extreme darks or cast shadows; then the large masses of half-lights and half-darks; and, when the eye finds leisure to pass from these, it will penetrate the parts in shade: consequently the form and distribution of the masses of light are of primary importance.

The lights and shadows of Nature are continually varying in position, intensity, and opposition; thus affording, by their endless play, that relief to the eye the want of which would be felt in a monotonous tone. Again, there is an evident tendency in nature towards one focus or spot of bright light, and one portion of shadow or concentrated dark; and when in art these are in opposition, a greater and more brilliant effect is the result; so that, without the aid of colour, by a due arrangement of these alternations and proportions ample breadth may be obtained without flatness or monotony; and the eye, thus attracted, will in one part be excited, in another lulled to repose: the whole attention being rivetted on the result, a highly pleasing pictorial effect will probably be produced. The breadth here alluded to is extremely difficult to attain; and Sir Joshua Reynolds observes, that "an inferior artist, being unwilling that any part of his industry should be lost upon the spectator, takes as much pains to discover, as the greater artist does to conceal, the marks of his subordinate assiduity."

In the study of light and shade in its relation to landscape-painting, we should first notice what kind of light illumines the whole scene, whether it is general or particular; because much of the character of the subject depends on the truth with which this is expressed. When the sun is concealed by clouds, there will be no very distinct lights and shadows on the

objects; on the contrary, when the sun is either unclouded, or only now and then obscured, these lights and shadows will be present in great variety. This variety will be greater when the sun is on one side and near the horizon, in the morning or evening, than when vertical at noon. The sun being low, the shadows will be prolonged; and, by passing from one object to another, so connect them as to form pictorial effects.

When the outline alone is to be studied, the first effort is to see it distinct from every other quality; that is, from light, shade, or colour. With this intention, the student should select a simple form, such as a vase, and cut it out as a silhouette or plane, in cardboard or some other substance; by relieving this with another of a different colour or degree of light, the eye embraces the whole form without difficulty. If a more intricate composition, or a landscape is to be studied, the outline above should be carefully made on white paper, that the size and arrangement of the different parts may be distinctly seen. But when light and shade are studied, the artist frequently shuts out the mere boundary line of the objects, and, at the same time, translates the colours into their relative value in light and shade: he ignores them as colour, but accepts them as light and shade. Lastly, when colour is to be chiefly considered, allowing it to engross his first thoughts, he chooses forms presenting the best opportunities for its display: but in so doing, he must still recollect that colour is subservient to light; and landscape painters in particular, who, viewing nature on a large scale, can use few artificial contrivances to modify their effects, must endeavour to unite in one picture these three essential qualities of a fine work of art. Before entering more fully into the details of this subject, I shall quote, in support of this system of procedure, the following passage from Sir Joshua Reynolds on general effect: "There is nothing in our art which enforces such continual exertion and circumspection as an attention to the general effect of the whole. It requires much study and much practice; it requires the painter's entire mind; the artist who flatters his own indolence will continually find himself evading this active exertion, and applying his thoughts to the ease and laziness of highly finishing the parts, producing at last what Cowley calls 'laborious effects of idleness.'"

With the view of simplifying the process whereby this general effect

may be obtained, without sacrificing the particular light and shade belonging to each object, it will be necessary for the student to examine solid bodies of every shade and description; in fact, to study nature under the various phases presented by different lights and shades, remembering, while thus employed, that he has to portray truthfully on a flat surface these infinitely varied solids; a difficulty only to be overcome by increasing the effects produced by reflections, refractions, and atmospheric influences. Many striking qualities and beauties of nature will doubtless escape him, but others he will seize and amplify. His first great effort must be to separate the light and shade produced by a brilliant sunshine from the natural colour of each object within its influence; for, as we have proved in Chap. I. Section III., the richest and deepest colours are as nothing compared to the effect of the effulgence of this sunlight. To impress this fact more firmly on the mind, let the student take the earliest opportunity of examining those substances the colour of which approaches the nearest to light, as white chalk-cliffs or hills covered with snow, from such a point o view that they may be between him and the sun. He will then perceive that in this situation, notwithstanding the quantity of reflected light still remaining on them, they will appear almost black. Or, let him when in a room look from the window upon a landscape under the most gloomy sky, he will at once see that it appears light in comparison with the shade of the room. By these experiments he will gain some sound data, and become convinced of some important facts, on which to found his practice.

In addition to the above careful study of natural effects, the diligent student will take every opportunity of examining and analysing the works of those masters who have best succeeded in their choice or arrangement of light and shade. To aid him in these researches, he will find Sir Joshua Reynolds' practice of copying, on a small scale, merely the light and shade of a picture, without regard to form or colour, and thus arriving at the proportions that they bear to each other, well worthy his attention. This practice is sanctioned by the most successful of our modern artists, and, even when studying from nature, should immediately follow the attainment of the composition or outline; and although this system has not met with the approbation of some writers on the theory of art, yet it must be evident

that, as even under the most fortunate circumstances subjects are not found complete in all their various parts, there is an urgent necessity for rules to guide the student in the choice and disposition of his light and shade; for, however perfect a landscape may be in the arrangement of the lines or forms, still it may fail in the chiaroscuro or in colour, and thus prove that there was ample room for further thought.

The reader must bear in mind that these remarks apply chiefly to landscape-painting; for in historical painting the artist has a much greater scope for selection and skill in the arrangement of the materials composing his picture. Subjects taken from history have but a small space of open sky or air; the incidents selected having most of them taken place within-doors, are generally made to occupy nearly the whole of the canvas. Moreover, owing to the dark colours necessary for the costumes of the figures introduced, there is but little reflected light in historical paintings compared with that of landscape subjects. The placing of the figures and the admission of light are also very much at the discretion of the painter. Costumes and other accessories afford opportunities for the display of taste; but their colours, from their close proximity, offer less real power in representing the difference between the degrees of light and shade, and their transitions in chiaroscuro are made in a less decided manner. Again in adding the local colour to objects, those of a dark colour may always count as shadow, and those of a light colour as light. On the contrary, in the broad expanse of nature there must necessarily exist a more brilliant and extended degree of light, more reflections, and, in the deep shadows, more intense effect.

Having thus given a concise view of the principles involved in chiaroscuro, it is now the author's wish to explain and illustrate their practice. With this view, he has introduced some diagrams and examples of subjects treated in the broad and general manner recommended. When the student has made himself master of these ideas, he will doubtless have but little difficulty in following them up with many others, which the various scenes and circumstances around him will suggest. The first object being to secure the just arrangement and proper quantities of light and shade, half-lights, and shadows of various strengths, the student should

avail himself of such materials as he can handle with the greatest facility, and confine his attempts to a few objects in the immediate foreground. If paper of neutral tint be employed, either white chalk or Chinese white may be used in addition to the black chalk. Should the brush be preferred, sepia and white, with the addition of a little blue, will be found adequate to the purpose; and, by passing these materials one into the other, or one over the other, a middle tint will be gained either with the brush or the stump. By this mode of rubbing-in the effect within a small space, all the fascinating qualities of touch or outline are passed by, and, no time being wasted in aiming at delicate execution, the danger of losing the effect, as well as the sentiment to be conveyed, is avoided. In practice, it will be necessary to study chiaroscuro in two parts: first, the simple and natural light and shade appertaining to every opaque body when seen by a strong light; then, the general arrangement of all the lights and darks, whether they are the result of variations in the accidental light and shade, or of the stronger colours of objects represented in black and white. The former will be readily understood by looking at a simple form lighted up by the

Fig. 1.

sun or some strong concentrated light, and observing how clear and distinct this separation is; the parts not opposed to the light are in shade, but

if another body come between the object and the illuminating power, the part deprived of light will then be in shadow. Shadows projected from objects in the light are called cast shadows: an important difference, and one which should be clearly impressed on the mind of the student. Shadows are darker than shades; for the latter receive reflected light, varying in power and quality, while the former are not in a position to be thus affected. But while definite in this quality, they vary in their outline, and assume forms depending on those of the objects which intercept the light and the form of the surface on which they are cast: they are, of course, not visible in a surface already in shade. (Vide Fig. 1.)

When the eye has obtained the power of defining these two varieties of shade or darkness, it will then be requisite to observe, that besides these, there is in every solid object, or collection of solid objects, whether forming an in-door or out-door view, a large portion which, being neither light nor dark, is composed of middle tint, itself subject to be again divided into half-lights and half-darks. If the light be very decided and general, the darks will be small in quantity, but brilliant and effective; on the contrary, if the darks and darker half-tints predominate, the lights, as in many of Rembrandt's pictures, will be of great value.

In order to train the eye to observe these differences of tone, the student should first practise drawing strokes of equal strength and distance from each other, as in Figures 2 and 3. These, when regular, have the effect of a transparent tint or shade; and, whether made with dark or light strokes, allow the eye to penetrate between them; and thus imitate, in some degree, the permeability of shade. Now, as the eye has the power of penetrating shade or shadow, it follows that the darks representing them should not by any means look solid or opaque, like the lights. Fig. 4 is intended to show the effect of a graduated tint increasing and diminishing, or a succession of even tints, of different degrees of intensity, placed side by side. When bands of flat tints are placed in opposition to others of different power, either lighter or darker, they appear darker or lighter by contrast; and this to such an extent, that in an instance where the shadow of a projecting board was thrown of six different degrees of strength, from six burners placed on a wall, the whole had the appearance

of a fluted column, and it was only by casting an additional shadow over them all that the surface was proved to be flat. When beginning with

Fig. 4.

Fig. 5.

Figs. 2 and 3.

a faint tint, they increase gradually to an extreme depth, and then decrease again, great variety of tone is obtained, reminding us of the increase and diminution of sound.

By taking as a ground for these tints some middle tint of a neutral tone, and merely indicating thereon the extremes of dark and light, and graduating these a short distance, we can leave a great portion of the middle tint of the paper untouched, when it will represent the half-lights and half-darks so prevalent throughout nature. (Vide Fig. 5.) The student, at the commencement of his course, will find the practice of these tints, with their various modifications, of great importance, since by their aid, before the hand has been much practised in drawing, a vigorous, skilful, and rapid execution can be easily acquired; whereas, should a careless, slovenly execution be indulged in, its amendment will ever afterwards be extremely difficult. If, on our first efforts in writing, the hand requires an efficient training, how much must the value of such training be enhanced when we make our first essays in the more difficult art of drawing! In short, in this, as in all other arts, it is highly essential that the first advance should be made in the right direction; for a moment's

reflection will convince the student how irksome would be the task, when, by a long and desultory observance of nature and art, his taste had become fastidious (his ability to imitate remaining uncultivated), to retrace his steps, and recommence with attempts at acquiring these elementary powers. In art, the means producing the effect should not only be unobtrusive in the finished work, but so easy in their application as to leave the mind untrammeled when employed on the higher qualities of the picture; and Sir J. Reynolds observes, that "a degree of mechanical practice, odd as it may seem, must precede theory. The reason is, that if we wait till we are partly able to comprehend the theory of art, too much of life will be passed to permit us to acquire facility and power; something, therefore, must be done on trust, by mere imitation of given patterns, before the theory of art can be *felt*. Thus we shall become acquainted with the necessities of the art, and the very great want of theory, the sense of which want can alone lead us to take pains to acquire it: for what better means can we have of knowing to a certainty, and of imprinting strongly on our mind, our own deficiencies, than unsuccessful attempts! Thus theory will be best understood by and in practice. If practice advances too far before theory, her guide, she is likely to lose her way; and if she keeps too far behind, to be discouraged."

In our study of light and shade, we must bear in mind that, although in the first attempts to imitate form outlines of different degrees of strength are used, yet they are in reality but the boundaries of surfaces, as planes are of solids; so that when the lights and shades are imitated by tints, outline should no longer appear. This is shown in the shaded or light sides of the cube and the graduated shades on the sphere in Figs. 6, 7. In viewing the Figs. 8, 9, it will be evident that the eye, being naturally attracted by the light, dwells on this before passing on to the shadow. This reality of light

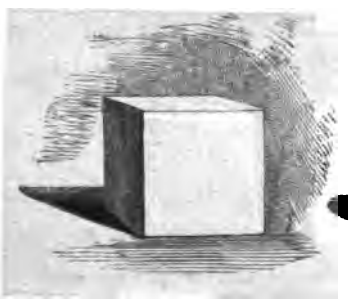


Fig. 6.

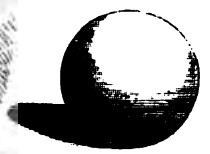


Fig. 7.

and indefinite quality of shade render it necessary to make the lights opaque and the shades transparent; the former, as may be seen in the prominent portion both of the bust and curtain, being generally left round or convex.

Figs. 8 and 9.

Before adverting to the choice or arrangement of the light and shade of a picture, it must be noticed, that objects nearest the eye have the most brilliant lights, the darkest shades, and the deepest shadows, all of which diminish in power as they recede from the eye, and that in the distance they pass into one uniform gray or neutral tint, just relieved perhaps by the light of the sky. Distance has a similar effect in regard to colours, and may be considered as a part of aerial perspective. For example, take some black object, such as a hat or coat, and observe the difference both in the local colour and shadow, when close at hand, at the distance of a hundred yards, and at some third spot still farther removed. The eye soon discriminates the degree of depth in the shadows and of brilliancy in the lights; and thus, by making a decided difference between the part of the object in shade and the cast or projected shadow, great appearance of sunlight and reflection is given. To this degradation of power, white forms the only exception; a fact observed by Leonardo da Vinci, and again by Fresnoy, in his *Art of Painting*, thus:

> "White, when it shines with unstain'd lustre clear,
> May bear an object back, or bring it near:
> Aided by black, it to the front aspires;
> That aid withdrawn, it distantly retires:
> But black unmix'd, of darkest midnight hue,
> Still calls each object nearer to the view."

Perhaps, in his first attempts, the student will see no difference in tone in the whole interior of the doorway (Fig. 10), or of the window (Fig. 11);

but by degrees he will perceive that much of the side of the doorway and the mullions of the window are illuminated by reflected light; and that even in the remaining portions of shade, part appears darker by being in opposition to the strong light of the step, the sides of the door, mullions, &c.; that such parts are, in fact, cast shadows. Besides these observations, which apply to both figures, many varieties of shade are produced in the window by reflections from the differently coloured surfaces of the glass, curtains, blinds, &c.

Fig. 10.

To most students in art there appears a great step or division between the light and shade belonging to each object and that disposition of light and shade more generally known as chiaroscuro; this general arrangement or selection being regarded as something depending on taste, and impossible to be acquired from another. But this is evidently a mistaken idea; for whatever has been learned by careful study from nature and the works of the great masters can be communicated.

Fig. 11.

Art can never surpass nature; the grandest effects ever produced in pictures are but feeble in comparison to the glorious reality. Let us, then, examine with the utmost

care those circumstances and effects best adapted to charm the eye. Once understood, they will become firm data on which to found our system of art. Great difficulty is experienced by some students in comprehending the difference between the representations of objects with their own light and shade alone, and that of the same objects combined with others and treated in a pictorial manner. To these aspirants, the notice in the Academy Catalogue, that "no mere transcripts of natural history, or portraits without backgrounds, can be admitted," is a complete enigma. They should understand that, to constitute a picture, there must be a fortunate combination or careful arrangement of lines or forms; and a favourable moment must be chosen for catching the light and shade most appropriate to the subject. The importance of the latter must at once be evident from the consideration, that the same subject may present itself under various effects of lights and shadows, many of which would, if represented in a picture, distract the attention from parts more worthy the spectator's notice; and that it is only by devoting themselves to a careful study of well-digested rules, and a constant reference to faithful delineations of nature, that students can hope to build up a system which will enable them to express the various sentiments they may wish to convey.

The principles and rules explained and illustrated in this section of the work will relieve the student from that most uncertain condition—the want of knowing how far he may depend upon nature, how far upon his own invention. Let him, however, constantly bear in mind what Sir Joshua Reynolds says when speaking of Gainsborough, that "he had a habit of continually remarking to those who happened to be about him whatever peculiarity of countenance, whatever accidental combination of figures, or happy effects of light and shadow, occurred in prospects, in the sky, in walking the streets, or in company. If, in his walks, he found a character that he liked, and whose attendance was to be obtained, he ordered him to his house; and from the fields he brought into his painting-room stumps of trees, weeds, and animals of various kinds, and designed them, not from memory, but immediately from the objects;" and, following so laudable an example, let it be the constant aim of the student to draw his resources from the inexhaustible storehouse of nature.

The student in landscape has this great advantage over the historical painter, that, whereas the latter is called upon to imagine the costumes of his figures and to adjust the light and shade of his subject, the former, without stopping to consider the exact proportions of light and shade, or the precise quantity requisite to form a picture, may at once resort to nature for his model, having by his previous study acquired a knowledge of the right aspect under which to commence his work, leaving the occupation of producing imaginary effects of light and shade until his mind is well imbued with the truths of nature. In all the first sketches let her be faithfully copied, and let no attempt be made to reverse her order by placing in light what appears in shadows. Proceeding thus, in all simplicity, the student will find nothing to perplex him. On the contrary, in natural scenes he will often observe the most beautiful combinations of light and shade that can possibly be desired.

By far the greater portion of most pictures is composed of tones which may be described as neither very light nor very dark; these two extremes being reserved for comparatively small points of the subject. When, on the broad expanse of these middle tints, either light or dark forms are intended to be painted in relief, in order to give them prominency, they should be convex. (Vide Fig. 12.) It often happens that the light gradually increases to one point or focus of extreme brilliancy: in this case, light and dark being always most brilliant when opposed to each other, the greatest dark may frequently be found in close proximity to the most brilliant light, thus creating a most attractive point in the picture. (Vide Fig. 13.) This must not, however, be followed too closely, as occasionally it will be quite sufficient to contrast the greatest mass of light against some well-delineated object of interest with reflected light on it, such as in the church and castle in Fig. 14. Here, by this disposition of the

Fig. 12.

interest as well as the contrast, a sufficient degree of opposition is produced; and the shadow, by being graduated towards the centre of the subject, is not separated. The light of the cloud is repeated in the water, but not in such a quantity as to interfere with the mass in the sky.

Fig. 13.

When clouds are passing over the earth or sea in parallel lines, their shadows on either surface, if unbroken by forms or waves, will also be parallel, and produce great simplicity and breadth of effect. The direction of the lines will not, however, assist the perspective; its force and truth will depend entirely on the management of tones and hues called aerial perspective.

Fig. 14.

Another way, almost as simple, is to divide the picture into two parts diagonally, but broken in a slight degree by carrying a small portion of the shadow into the light, and the reverse.

Again, if the subject be suitable in composition, such as a coast-scene, it may be divided into a large mass of light, having a wedge-like form of shadow projecting into it from either side. Such effect is indicated in Figs. 14 and 18. It may be remarked, that the converging lines of the wedge will greatly assist in directing attention to the point of interest; and it would be well to remember, that when the eye is directed to that spot it should be supplied with some object of interest. This form can, of course, be given in light; and on the sea-shore the clouds often float over the sea in

such a way as to produce this effect. Many of our first marine painters have adopted this treatment with great success.

Fig. 15.

When the intention is to concentrate the greatest interest on one particular point, the whole subject may consist of a graduated mass of tints, the half-light being sometimes relieved by the half-dark, and the contrary. On the dark tint may be placed another, gradually approaching a focus or concentration of a deep tone; here there may be a single spot of the greatest depth of colour, and in close proximity to this a bright but small mass of white, such as a figure or the base of a column. This arrangement will give a great degree of interest to that portion of the subject in which such object is placed. (Vide Fig. 15.) It is to be remarked, however, that it must not be a perfectly graduated tint, but rather a succession of tints having partially distinct forms or edges; these forms greatly contributing to the modelling of the whole, and, even in such softened forms as clouds, presenting a good effect. This disposition of the masses is also shown in the morning effect at the head of the section; in which example, as in the accompanying figure, the deepest shadow is neither placed in the foreground, nor at the corners of the picture, nor yet in the extreme distance, but in the middle distance; neither does the greatest light occur in the corners, though the modern school, more frequently than the old masters, has those portions of the subject light. The most approved p actice is, not to make those parts of the subject which are out of the focus of the eye attractive either with light or dark, but to assign them such a middle tint as may suffice to give solidity, and to bring out the other parts of the picture.

Cast shadows, whether of individual objects in the picture, as in Fig. 16, or of more extended objects, as clouds, out of the line of vision, are very useful in indicating the shape of the surface on which they are thrown; often, while differing materially in appearance from the shape of the

object, defining more distinctly the undulations of the ground; at other times seeming to hide unnecessary or ugly forms, and to support the lines of the composition where the outlines of the objects themselves are not sufficient for this purpose.

Fig. 16.

In the accompanying example (Fig. 16), the stems of the fir-trees in the middle distance are both darker and lighter than some of those in the foreground, showing that the greatest darks and the most brilliant lights may take that position when influenced by accidental light and shade combined with local colour. As, in speaking of composition, it was suggested that lines receding from the foreground or the base of the picture into the distance should be selected in preference to those in other directions, so it is in general better to avoid all such shadows as cross the picture in straight parallel lines, or, indeed, to show any lines too equally relieved throughout their whole extent: as an instance of these defects, and also of the necessity for more variety of light and shadow, see Fig. 17; and, contrasting it with the same subject in Fig.

Fig. 17.

18, observe how, by a different treatment, a more concentrated effect has been obtained. The lines of the fence, no longer so equally and strongly marked, are rendered more picturesque by being varied and broken by shadows alternating with a few bright lights; while, to give variety to the lines, such forms of foliage have been selected and placed in light as group well with the other portions similarly situated. The trees in the extreme distance are not permitted to be darker than those in the middle distance.

Fig. 18.

In order to facilitate the study of light and shade, the student should make his first attempts either in the morning or in the evening, since at these times nature is presented with greater breadth; the sun being low, shadows are more prolonged, and, by passing from one object to another, serves to connect those which, from their situation, would otherwise be separated. While aiming at this desirable quality,—breadth,—the student, in classifying the objects, will frequently find it an advantage to confine himself to the representation of every object at its own distinct distance. (Vide Fig. 19.)

Fig. 19.

In this study, the sky and distant mountain may be indicated by a tint of

blue; the middle distance by a deep warm gray, composed of the sky and foreground tints; and the foreground by a rich warm colour. In this way, the general effect being gained at the expense of the smaller and less important lights and shades, great breadth is the result; and, this secured, slight modifications may without detriment be introduced both in the colour and the interior forms of the masses. A discipline of this kind in perspective and aerial effect, but for very different purposes, has lately been enforced among the Chasseurs de Vincennes, and has now become general in our own army: in order to educate the sight of all young riflemen, and enable them to judge of the exact distance of objects, they are called upon to note the variations which occur, not only in the size, but in the colour of objects under every kind of light and shade.

In unclouded daylight, objects, whether in light or shade, will for the most part be relieved from the sky by their greater strength of tone. The sky being that portion of the picture whence all light proceeds, will generally be much lighter than the distance, or any other part not having the highest lights; dark stormy clouds, or bright objects in sunlight relieved from a clear blue sky, are of course exceptions.

In treating of the most simple division of chiaroscuro, namely, the light and shade belonging to each object, it was remarked that the greatest depth of shade and most brilliant lights are seen in the nearest objects; but it does not follow that, in the larger masses of cast or accidental shadows, the greatest depths should be placed either in the foreground, or, as was formerly the custom, with the view of forcing the eye towards the centre, in the corners of the picture; the contrary more frequently occurs in nature, where, owing to the clouds, or the shadows and local colours of trees and woods, the greatest mass of dark is often situated in the middle distance. In explanation of this, it must be observed, that in the foreground of the picture the eye penetrates so clearly into the details of every object, that, to imitate this transparency, it cannot be made so dark as in the middle distance, where these details are lost in a breadth of shade.

As a general rule, neither the light nor shade should be represented crossing the whole of the picture in lines parallel to the horizon, although in twilights there may be much of this appearance in the lower clouds.

More variety is obtained by introducing it on one side, near an upper corner, and allowing it to pass in unequal quantities towards the opposite side, as shown in Fig. 20, cottages on the coast of South Devon; a sweet spot, where Collins painted some of his most successful pictures. In this subject the light is introduced in a broad mass on the left, rather behind the objects in the picture, thus casting them nearly all into shadow, the greatest depth of which is, in this instance, increased by the dark local colour of the thatch, bricks, &c.; and these again coming in contact with strong light, the interest of the picture is thrown into the distance, where some carefully delineated boats and figures at once increase both the light and the effect. The foreground, however, must not be left totally void of interest, but should in a moderated degree repeat the light of the sky; a mode of treatment particularly desirable when the objects are not of sufficient size or interest to catch the eye, as in Fig. 22. In Fig. 21, the cottages are made the objects of the greatest interest, which is increased by figures, baskets, nets, and boats, relieved by their strong local colour from the walls; the large mass of dark clouds forming an appropriate background to the whole. It is important to observe, that when any object is placed in light, it is essential

Fig. 20.

Fig. 21.

to draw all the details with care, in order to give it that degree of finish which alone can cause the eye to rest upon it with satisfaction. Without such care, the subject will appear bald and uncouth; and, however truthfully certain parts may be delineated, the whole will have an unfinished and defective appearance. Should the student find a difficulty in representing any particular object in light, it will be better to put such object under shadow, where it will attract less attention.

The aerial perspective of all receding roads, paths, or streams, is greatly assisted by shadows thrown across them. In Fig. 22, the ruts of the wheels being irregularly expressed, sometimes marked, sometimes not, destroy the formality of the lines; in rivers, the banks may be shown more or less, the eye being at one point directed from them by the reflections—occasionally by reeds, bushes, &c.; at other times, to avoid formality, they may be lost sight of altogether.

Fig. 22.

The ripples also on streams generally assist in showing the perspective: they should in some degree follow the form of the banks, and be marked only here and there, as they reflect the light or the dark colours of the sky. When the bright reflexes of the sun or sky are shown in these ripples, it will be necessary to give the water, and all the other lights of the picture, greater tone, since these must be of less power than the reflections either in water or polished surfaces, such as glossy leaves after rain, &c. See Chapter I. Section I. "On the Prismatic Colours."

Great variety may be given to studies of large objects near at hand by the way in which the outline or shape of the whole is relieved: the cottage in Fig. 23 is an example. The mass is here generally darker than the sky, being brought out partly by shadow, and partly by the opposition

of different local colours; a small gleam of sunshine on the door and figures about it, though sufficient to create interest, is not enough to compete with that of the sky. When masses of light are separated from each other, or when the light ends too abruptly, the artist, by introducing a white or light-coloured object, such as a cloud or the sail of a boat, may both add to the quantity and alter the shape of the mass of light, while he increases the interest and prevents the light from becoming isolated. To explain this more fully, the author takes the liberty of recurring to an old but very appropriate anecdote. A certain artist had introduced into his picture a black and white dog in the act of running across the road; a friend expressed the highest approbation of the work, but added, that "for the life of him he could not understand what the dog was doing there." "O," replied the painter, "he is merely carrying the light and shade through the picture."

Fig. 23.

Masses of dark, either in full strength or broken by some object in half strength, may with good effect be projected into or relieved against the sky. Fig. 24 represents a ruin, with straight and severe lines, but varied in quantity; the

Fig. 24.

whole mass being in this instance relieved from the bright light in the simplest manner, giving at once quietness, firmness, breadth, and solidity to the picture. The sun being behind the ruin, his beams appear to break the straight edge of the walls, and, spreading over the surrounding parts, give a half-light to what would otherwise be in shadow; the cattle in the foreground receive the light in a natural way, but being only of secondary interest, care is taken not to give them too much importance.

Fig. 25.

When it is requisite to place an object in the centre of the picture, with an equal amount of distance or background on each side, as in Fig. 25, it will be advisable to vary the effect by placing the darkest mass contrasted with the largest and brightest light on that side to which the attention is to be directed. If, at the same time, additional interest be created by the presence of one or two figures, while the other part is left in quiet monotony, all inclination of the eye to wander will be entirely removed. In the example, the parallel shapes of the house are likewise broken by cast shadows; and the direction

Fig. 26.

taken by the shadow in the foreground assists in giving variety to the composition. Again, in Fig. 26, two avenues are seen presenting similar appearances and like difficulties: here, to obviate the unpicturesque effect resulting from showing two parallel forms of equal interest, that vista along which the road passes is blocked up with shadow and figures in shade; and the light being allowed to strike obliquely on the house, converts the whole mass of the building into a form both more suitable and larger in quantity, thus leading the eye up the extent of the valley, designedly made the principal point of attraction.

In Figs. 27 and 28, we have that view of Trent which so often attracts the notice of the artist. In Fig. 27, the tower is relieved in dark local colour, becoming gradually lighter towards the base; the light, though principally in the sky, being connected with that on the buildings, which are intended in this effect to form the chief interest: the dark tower, however, is not suffered to remain isolated, but is made to harmonise, both in form and light and shade, with the rest of the picture by means of the bridge and shadow on the river. The light of the clouds is also reflected in the water, the latter being varied and relieved by the strong colour of the foreground. In Fig. 28, on the contrary, a momentary gleam of sunshine, piercing the dark stormy clouds, illumines the tower, which is thus strongly relieved; the cast shadow on the building is more definite, and the contrast of light and shade is repeated on the sails and boats. By this treatment, the chief interest being concentrated on the tower, the view might with propriety be called "The Old Tower at Trent in the Tyrol;" whereas the former might as appropriately be named "The City of Trent." It may be remarked, that

Fig. 27.

the name by which the artist intends his picture to be known often gives a clue to the treatment, not only of the light and shade, but of the whole composition.

Fig. 28.

When shadow is thrown all over any part or object in a composition, it is highly important that the shape should be agreeable without being formal or peculiar; when two or three objects are grouped together under the same shadow, monotony may be avoided by some difference in the local colours. Should objects in the picture present a shape unpleasing or deficient in quantity, the light may be either carried on by other objects or represented in the sky: a different effect may also be obtained by choosing a different time of day. Objects of uncouth or difficult form may be united by some general effect, so as to dispense with a portion of their outline: in this way parallel lines may be discarded, and others obtained unequal in size, and varied by the arrangement of the accidental shadows. Any formal manner of treating subjects, such as relieving light against dark, or dark against light, should be used with caution, and varied by difference in the quantities and tones, otherwise it might lead to a mannerism which, being contrary to

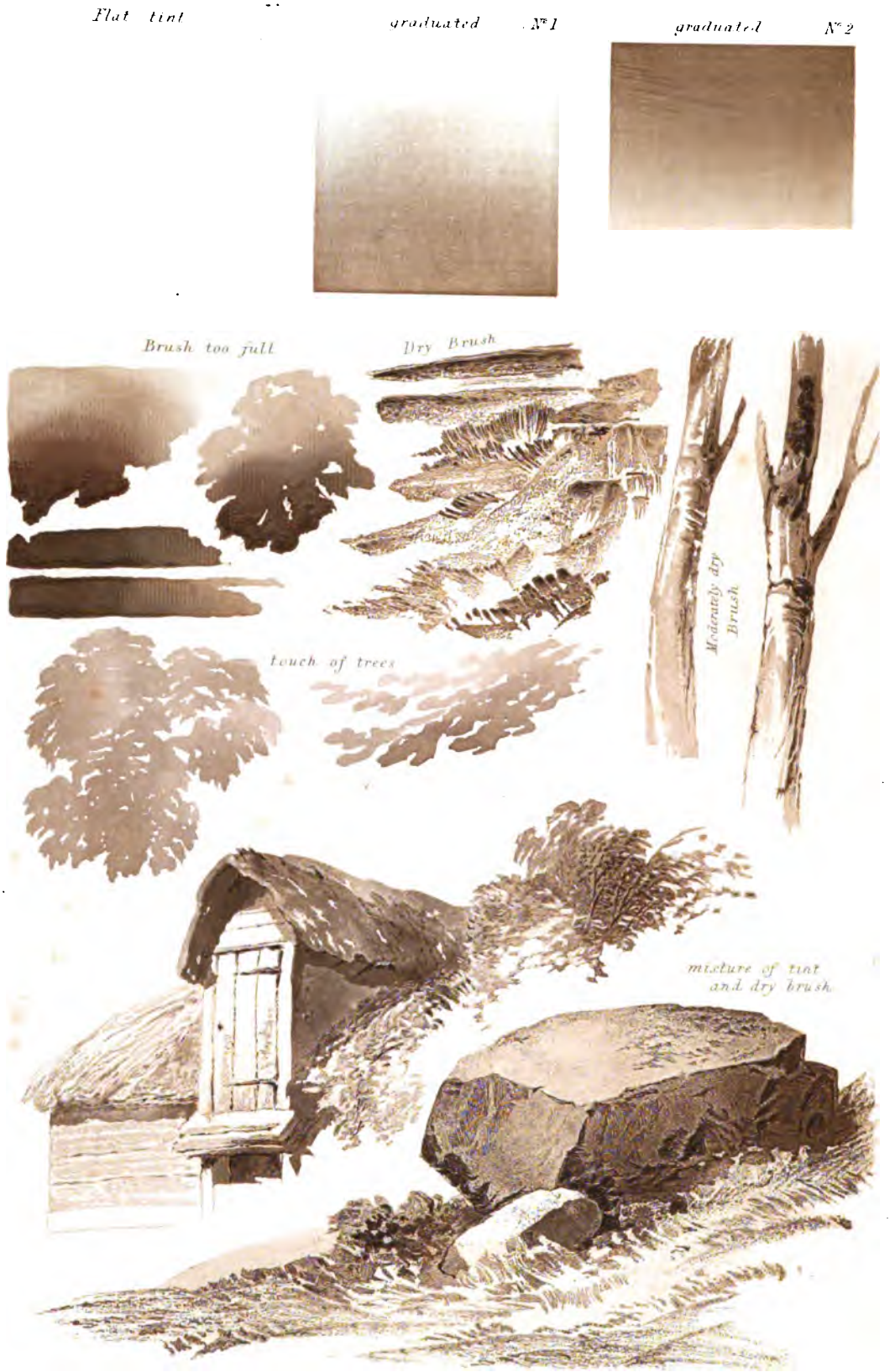
Fig. 29.

the variety and simplicity of nature, is usually distinguished as a "tricky" style of art.

In Fig. 29, great breadth is gained by placing light upon light and dark upon dark, with a large portion of half-tint of a deep tone. Subjects treated in this style present, if managed with skill, a very broad, rich, and pleasing effect. When light passes into light until it arrives at a focus or point of greatest intensity, a brilliant and natural effect, approximating to that produced by light proceeding from the sun or other luminary, is the result. This simple gradated mode of treatment is often used to obtain breadth in colour as well as light; thus warm colours, having been introduced in the first instance, may be made to pass gradually into those of a cooler tone. In these cases, a small portion of light in the one, and of colour in the other, may be repeated on the side opposed to the largest mass.

The author trusts that the above brief notice of chiaroscuro, or light and shade, may enable the student to comprehend at least its leading principles. These are of such vast importance to his ultimate success, that time spent upon their acquisition will be well bestowed, and not only greatly conduce to a rapid progress in the power of making pictures generally, but also materially lessen the difficulties of water-colour painting.

THE HANDLING OF THE BRUSH.



LEIGHTON, BROTHERS.

PLATE 5.

SECTION III.—THE HANDLING OF THE BRUSH, AND MODE OF WORKING.

PERFECT freedom in all the motions of the fingers, hand, and wrist, and dexterous management of the brush, should be acquired before the student attacks the difficulties of colour; and the time spent in practising with sepia or neutral tints, with the view of gaining this facility, will be well bestowed; for the brush is a much more effective instrument than the pencil, as with it we can represent at the same time form, light, shade, and colour. Sir Joshua Reynolds observes, "That the brush is the instrument by which the student must hope to obtain eminence. What, therefore, I wish to impress upon you is, that, whenever an opportunity offers, you paint your studies instead of drawing them. This will give you such a facility in using colours, that in time they will arrange themselves under the brush even without the attention of the hand that conducts it." We must, therefore, before commencing the study of colour, describe briefly the different exercises which are necessary to the attainment of this desirable power.

Sepia, without any admixture, is generally chosen as the most suitable pigment for brush-practice, as its light washes are extremely clear, and it possesses great power. Its general colour is not disagreeable in any part of the picture; and should other tones be required, it will harmonize well with cobalt and the other blues which are used in the sky; it may also be resorted to with equal advantage in the richer tints of the foreground. The paper employed may be white or tinted; the latter, as it allows the use of the Chinese white for the lights, is generally preferred.

The paper should be raised on a desk, forming an angle of 30 degrees

with the table. The hand may bear lightly on the paper, or be moved about freely from the elbow. The whole person should be held nearly upright,—certainly more upright and distant from the surface than it generally is in writing, the eye having to include a larger space. The brush should be moderately filled with colour, and the touches made with boldness and decision; always, in the first place, securing the form on the outline of the tint, and then completing the whole by the backward motion of the brush.

The examples given in Plate VI. indicate some of those exercises which are the most useful. They begin with a flat tint, the power of producing which is indispensable. The brush should be filled with colour, and the tint begun at the left-hand corner, and, after having passed along the outside edge at the top, should proceed rather diagonally across the form; at the same time care should be taken that the supply is kept up, as in laying a flat tint an extra quantity is necessary to give the flatness.

A gradated tint (No. 1), beginning light and increasing in depth of colour as it progresses, is next to be attempted. Here the tint commences light, the brush being filled by degrees with the darker colour. In No. 2 this operation is repeated in an opposite direction. These exercises are extremely useful in accustoming the student to take up water or colour in the requisite proportions. By referring to the example following, the bad effect resulting from a brush being too full is seen in the excess of colour settling as it dries round the edges of the tint. Flat and gradated tints are employed in all parts of a drawing. When decided forms are required, such as the touches to indicate foliage or grass, tints which are made with less colour in the brush are more useful. And lastly, the colour is sometimes used with nearly a dry brush, and even dragged over the surface of the paper sideways, to give additional roughness or texture to broken ground and rocks, as shown in the remaining examples in the plate.

By these preliminary exercises much is gained. The pupil becomes acquainted with a few of the powers of the instruments he is principally to depend upon for his effects; his eye is trained to observe the minutest gradation in tone or colour; he will also soon perceive that colour has very different appearances when put on full or dry, when floated, blotted, or dragged. And the close observation that these exercises occasion will even-

tually produce more refinement in his works than if he hastily dashed in his colour at random. Indeed, the author considers the dexterous management of the brush and colours so important, that at the risk of being tedious to some, he has in this edition considerably added to this portion of his work in the succeeding pages on "Mode of Working."

MODE OF WORKING.

In the preceding pages, the nature of *colour*, including the various changes it undergoes, either by mingling or contrast, has been briefly described; and the student has been made acquainted with the qualities of the pigments, and other materials employed in producing its effects: some explanations have likewise been given of the terms used by artists,—the manipulations of the brush, &c. We will now, however, proceed to describe with more minuteness the usual way in which a water-colour painting is commenced, and the different modes of working generally used, leaving still further details regarding the execution of its various portions to be discussed under their proper heads.

The paper stretched (as described in page 63) having become thoroughly dry, a clear outline of the subject is to be made upon it with a moderately hard pencil. This outline, although requiring to be carefully done, must be effected, if possible, without having recourse to india-rubber, or even to bread, as the former injures the surface of the paper, and the latter tends to make it greasy. The student will not find this difficult if he has previously acquired the requisite degree of certainty in drawing with the pencil. No increase of power in the stroke indicating light and shade, no sparkling dots marking minute touches of foliage, should appear in the outline; all these interfere more or less with the tints and forms, which are to be produced entirely with the brush.

When the outline is complete, the drawing should be placed on a desk, at the inclination already described, in order that the eye may more easily embrace the whole subject, and that the washes of colour may flow downwards. In this respect, the mode of commencing a water-colour drawing differs greatly from that adopted with oil; for while oil-paintings are begun and finished on the easel in nearly an upright position, all large

water-colour drawings must be *commenced* in the manner described, although they may be *finished* on the easel. It is customary to begin with a wash of some warm but broken colour applied all over the surface; without this the paper appears opaque and cold—a defect remedied by this general tone, which gives an appearance of sunlight to the whole subject. The tint or wash, having been previously mixed up in a saucer, should be applied with a large flat camel-hair brush, commencing at the upper part, the left-hand corner, and passing gradually downwards. The tint is generally made with a neutral orange compound of yellow ochre and brown madder; but it may be advantageously varied by using for the more delicate aerial skies cadmium and rose madder; for the foreground, burnt sienna; and for water, raw sienna: but however composed, it must be delicate and scarcely perceptible. The paper must now be suffered to dry thoroughly, and afterwards be washed over with abundance of pure soft or distilled water, either poured from a jug or applied by means of a large brush; the water as it runs off being received on a tray, soft cloth, or sponge. These operations may be repeated, with variations in the tints, as often as is deemed requisite; always taking care to allow the paper to dry, and to use the pure water washing process between each application of colour. The result gives an aerial tint of great purity, not to be obtained in any other way.

Perhaps some may say, "Why not use a slightly warm-tinted paper at once?" But the student must recollect that this tint is varied, and by no means flat or of one uniform colour; and in that respect very different and superior to a tinted paper. By this first process also the outline, although rendered faint, is fixed on the paper; hence it is necessary to have it at once clear, decided, and delicate. In clouds, in extreme distances, or in snowy mountains, it is even advisable to omit it altogether, trusting entirely to the brush to produce the required forms. The tints produced by the process we have described are flatter and more aerial than those resulting from a single application of the coloured wash. A rough surface (such as that described in the note on "Paper," Chap. II. Section III.) gives an additional variety to these aerial tones, provided the colours are pure and have not settled into the depressions. If it be considered desirable to increase the granulated appearance, place a sheet of absorbent white paper over the

surface immediately after the tint has been washed with water, pressing equally upon it in all parts; this will take more of the colour away from the prominent portions of the paper than from the depressions, and thus give an increase of granulation. The aerial tones are to be carried over the entire distance, and, in fact, over nearly the whole of the drawing, with the exception of the foreground: they facilitate the representation of air, notwithstanding any other tints that may be placed over them.

If the effect intended to be produced be that of a warm sunset, the drawing must be commenced near the horizon with a rich tint of yellow ochre, cadmium, or Indian yellow, passing off into rose madder, vermilion, or Indian red; and when dry, the tones must be repeated in conjunction with the process of washing. Sufficient strength having been obtained in these tones, the brush is to be charged with a small portion of warm colour, and, recommencing at a little distance from the sun, the wash is to be passed over the others; but as it recedes from the light, it is almost immediately to be changed for one of cobalt blue, either pure or mixed with rose madder; and this process is to be repeated, each time taking up a purer blue. If there be any clouds in the sky, they are to be left untouched by these cooler washes. The shadowed parts of the clouds may next be added, and allowed to pass into the blue on one side, so as to present no definite edge there. This will give sufficient softness to their form; while the edges on the other sides, or that nearest the light, are to be rendered with a firm touch. In sunset effects, the first tones may all be given with the drawing in an inverted position, so that the light may flow into the dark tones, and not the dark into the light. All these first washes and tints are to be produced with a full brush, which makes them dry flatter and look richer than they would do if applied with a small quantity of colour; but as the drawing advances towards completion, more freedom, both as to the quantities of pigment and the manner of using the brush, is permissible: the latter may now be held so as to drag sideways over the surface, leaving scattered lights. In laying on these first tints a certain degree of boldness is desirable, so that the forms of clouds may be left with the well defined edges essential to their character, and without which they would look like wool or steam at a short distance from the spectator. When any of these first tints prove too

heavy, and cannot be sufficiently removed by repeated washings, it will be necessary to use a sponge, or by pouring quantities of water on the drawing, and applying a rather stiff brush, against the hair, to loosen the colour and thus remove it. If during the process the drawing be long in drying, it must not on that account be held to the fire, as drying it too quickly would cause the colour to produce a hard edge. Drawings are worked with the greatest freedom when the paper is slightly damp, but not so damp as to allow one colour to run into another previously applied.

The student must devote great attention to laying on these first tints; and when he has secured a neat outline, accompanied with a good study of light and shade, as described in Section II.,—proving also the proportions and situations of the different masses of colour by blotting them in small, (*vide* plates 23 and 26)—he may then proceed with boldness and energy; always recollecting that the washes dry rather lighter and cooler than they appear while wet, and also that they lose by contrast with the more powerful colours of the foreground added afterwards. As a general rule, a tint should not be retouched while wet; although, while in progress, a full wash may be increased either by taking up more of the same or a portion of some other colour, thus deepening the tone or giving it variety; or the tint may be softened off, and a contrary effect obtained, by repeatedly discharging a portion of the colour from the brush, and taking up water in its place. Again, some part of the colour may be abstracted by the brush when in a rather drier state: the spot will thus present a lighter tone when dry.

Should a tint appear either too warm or too cold in hue, or should some colour predominate in too great a degree, the defect may be obviated by washing it, and, while quite wet, adding a tint of an opposite character. Thus clouds too purple in tone may be corrected by a wash of ivory black, too vivid a green by a transparent gray. Much increase of power is often attained by passing transparent washes over others more opaque; by this treatment variety is gained, and the whole effect heightened: at other times it is advisable to stipple in pure colours in juxtaposition, provided they harmonise. Great depth of colour may be obtained by hatching or dappling colours over tints, and allowing the eye, as it were, to penetrate the mass.

STIPPLING is a mode of blending colours one with another by interlacing

them, or placing small portions of pure pigments side by side, so that the eye, passing rapidly from one to the other, unites them, and thus produces the same or perhaps more powerful effect than a mixed tint. One colour may thus be considered to be broken by a second, or even by more. This process has been used from the earliest oil-painters until now, when it appears to be more particularly practised by the water-colour school. Turner has given us examples of most successful stippling; and by using it has often gained a beautiful harmony and variety in his colouring. By the employment of this mode of handling, a play of colour is given that is extremely agreeable: it may be compared to the effect, but much more refined, of shot-silk. After the monotony of a flat tint, the variety and relief afforded by stippling on some additional colour is very great. Lines and forms can be indicated with just so much distinctness as is necessary; and by adding to the intricacy without disturbing the breadth, the eye penetrates these tints with the same pleasure that it searches into the undulating distances in nature; by it the general tone can be gradated to the extremest depths, yet without approaching blackness; for pure colour, although dark, will always be there. Colour that is crude or wrong can also be altered without the disagreeable and doubtful process of washing out: thus, if a mountain side in shadow be too cold or blue, a little brown madder may be stippled in, either in flakes, long or short, side by side, or crossed in diamond forms. If thus, it is sometimes called hatching; the interstices are also often filled up with some other colour, or small dots are filled in, as we see in fine line engravings. Should a slight green be wished, the blue or purple hue may be further broken by stippling in a pure yellow. In stippling, beware that the lines do not obtrude themselves too much: they would then degenerate into mannerism. Some degree of firmness is necessary; but the lines or dots should all have a certain reference to the general direction of the surface. An excellent example of the effect produced by skilful hatching or stippling, and thus varying the tone, may be seen in a fine water-colour drawing by Turner, exhibited at the Art-Treasures Exhibition, at Manchester, 1857, called "Bamborough Castle.' Sometimes a few well-placed strokes of nearly pure red are hatched over a floated blot of cool gray, giving a fine warm glow to the lighted side of

some cloud; at other times a ruin, evidently blotted in with nearly the same tint as the sky, is made to relieve considerably warmer by the sky being stippled down with nearly pure blue. It may be sufficient to explain that hatching is a kind of stippling in lines crossed at acute angles, thus; and stippling is applied to the touching with short feather-like strokes—long, short, or even in little dots; or the two may be combined, as we frequently see it in line-engravings, the dots being added if the lines are too evident. As a general rule, to preserve purity of colouring it is better to use the pigments nearly pure than to mix them on the palette beforehand: thus, if the part is cold and wants warmth, it may be stippled with cadmium and crimson lake or rose madder; if it wants strength or blueness, pure ultramarine is an excellent pigment, as it generally harmonises well with the tones previously laid on, "clearing it up," as artists say. Should these stipplings appear too evident, they may be easily reduced by rubbing them with a little stale bread, as ultramarine comes off with great facility.

On Blotting-in and Gradating.—An appearance of dexterity and ease is attractive in every art; and in none more than in water-colour painting. The labour with which the effect is attained is hidden; and the general effect, that which strikes the eye of every one, as a passing glance at nature would, is represented. This is the broad and rapid rendering of landscape truth that is still, and has been, so attractive in David Cox. It is not to be attempted by the beginner; but is most successfully practised by those who have studied nature with the greatest care and attention. This mode of representing nature is used with more success in water-colours than in any other style; and, as it has been observed by a clever critic, "It deals with things in mass, marking the broad distinctions of deep shade, half-tone, and light in all its gradations, and leaving out much of the details of objects. This kind of work demands to be viewed at a certain distance. It is true as far as it goes; and it is based on the theory that this mode of representation is the best suited to human senses and human faculties: it abandons advisedly the attempt at microscopic rendering of the infinite minutiæ of a landscape, a figure, a group, or a face. In sketches this mode is seen in its most recognisable and avowed form;

LEIGHTON, BROTHERS.

PLATE 7.

BLOTTING IN.—AN ELEMENTARY EXAMPLE.

LEIGHTON, BROTHERS.

PLATE 9.

START POINT, DEVON.

but it has been employed by whole schools, upon system, in all their works. The picture is to be true as far as it goes; but it does not profess to give the whole truth. We should judge works of this class on their own principle." This broad way of using water-colours is called by some "blotting-in;" and as some quantity of colour is required at once, it is better to make use of saucers in which to rub up from the cakes the different tones. The three or four pans in the lid of the sketching-box will do; but scarcely so well, as the colour in them is liable to mix. We will, however, endeavour to describe the more rapid alteration of tints principally used in sketching, and in the first stage of works called "blotting-in." For an effect such as Plate 8, "Start Point," South Devon, he should in one saucer mix a wash composed of cobalt, rose madder, and a little ochre, the cobalt predominating; these being the three pigments he would pass over each other in the first process. In a second saucer he mixes another tint of light red, cobalt, and a little black; in a third, indigo, brown madder, and a little raw sienna. He should have at hand two or three brushes: with one filled with the first tint he lays in the blue ether; with the second, less full, and taken up before the first tint is dry, he puts in the shadowed side of the clouds, and passes over the cliffs and also the sea, having waited until the edge near the horizon and cliffs was dry. This process must be used with some care, for if too dry the colours will not float or blend; and in order to give richness of colour, the wash must be full enough to allow the particles to dispose themselves well on the paper. As this plate is more fully described in the section on "Skies," we will now turn to Plate 7, where a mountainous effect is left in the first or shadowed-out state, having all the general tints melted or blotted into each other. A water-colour drawing thus commenced may be thought like a skilfully gradated crayon drawing, but possess more transparency, and can be worked upon with advantage when dry, as tints which harmonise tell with great effect on such a rich ground. This ground also affords an excellent body of colour from which to take out lights, as the tint, being firm, causes them to relieve with great force, the colour also comes off more readily and completely, and the lights appear brighter when either rubbed or ripped out with the scraper. They may also be stopped out previously to putting on the

tint: for this purpose white of egg is used; and when the general tints have been broadly laid in, the lights are recovered by rubbing with bread or india-rubber. In addition to the tints already described in the saucers 1, 2, and 3, the student may have two or three others of a deeper and richer description; namely, cobalt, sepia, and brown madder, indigo and purple madder, Indian yellow and Prussian blue, and Indian yellow and brown madder. With these full tints he proceeds as before described, taking up just so much in his brush as will allow of a certain amount of floating or blending with the preceding and succeeding quantity either of the same tint or of another tint and fresh brush. The great art is to preserve the requisite gradation, not allowing some of the tints to be either lighter or darker than they should be. With all this care much still remains to be done, either by further blottings-in or more delicate variations, by stippling, or dragging on colours in a drier state, or pencilling with different shaped brushes and tones.

To Gradate a Tint from one Colour into another.—This practice follows that on gradating tints with sepia alone; and the pupil should be able to do it well before he tries more intricate gradation: he should first rub up a good tint of Vandyke brown in a saucer, enough to fill his brush three or four times will be sufficient; in a second saucer he will rub up Prussian blue. He begins with the brush full of Vandyke brown; and as it becomes empty, he takes up more and more of the blue, discharging a portion from his brush each time before he replenishes it, until, when he finds it necessary to obtain purer blue, he dips his brush in water, and drags it back against the edge of his glass, thus discharging the larger quantity of the brown: he now charges his brush with blue; and at last washing it thoroughly, he presses the water out of it, and takes up pure blue alone. The inclination to run downwards will always cause the colour which is uppermost to predominate, unless care is taken to prevent it. To gradate a tint with regularity requires great practice; and it is better for this kind of study to use cake-colours, rubbed up in saucers, that the uncertainty of the taking up portions of pigments from the moist pans may be avoided. It is also difficult to know how much of the colour passes off when the brush is replenished with water; nothing therefore but practice and close observation can teach this art.

DRAGGING.—One of the chief objections urged against water-colour painting, is a deficiency of force and variety of texture and surface in the foreground. In oil-painting, the body and solidity of the chief pigments, with the mode of using them with white in the lights, enables the painter to produce with ease the greatest variety of surface and texture; he can also, with the power he possesses, glaze down with transparent pigments this surface, and by partially rubbing off this tone from the prominent portions again vary the texture. To imitate this manipulation, the water-colour painter uses his one or two sable brushes with all the dexterity and variety of movements that he can invent: in some instances, owing to the nature of his materials, he even has the advantage over the rival mode in floating on pure washes; for instance, whether they are very liquid, as for skies, or more consistent, as for blotting-in. To compete with it in the foreground, he has adopted a process called dragging, or the drag. The brush, moderately charged with colour, is held at a very acute angle with the paper; some of the hairs are caught by the prominences of the rough paper, and depositing the colour on them, produce a grain or granulation differing from and superior to the regular tooth of either ticking, canvas, or paper. If done with a dexterous and rapid hand, directed by a cultivated taste, there is an appearance of ease and dash about it that is very captivating. Of course colour can be dragged over the pure white paper; but it is more frequently employed in conjunction with tints laid with the full brush, as in Plate 6: a few broad washes or tints laid on, the brush, becoming drier, may be charged with more pigments from the box, swept, dragged, or even pushed about, but always, be it understood, with some decided intention. A variety of smaller forms are thus made; and the eye being allowed to wander among and through them, the stiffness and formal mechanical look is got rid of, and an agreeable freedom produced. Dark is in this case dragged over light, one transparent pigment over another: but sometimes in the immediate foreground, and in trees, light is required over dark; and it is in this instance that Chinese white appears to be of the greatest use in water-colours. The white is mixed up with the pigments on an earthen palette, and should look like rich thick cream; the brush is charged with it; if for a sharp flat edge or rock, it may be made into a wedge-like form:

the white is laid at this place at once, thus securing the smooth and solid portion; the remainder is then dragged on more or less where necessary. It should be remembered that pigments mixed with white always appear colder and grayer than without; but yet we must not diminish the quantity of white, for that would make them look grayer still, but increase the quantity of warm colour. All are agreed in one thing,—whether advocates for the use of white with all pigments and in all parts of the picture, or whether it should be restricted to the lights in the foreground, that white used thin has a poor and miserable effect. It must be confessed that this white does not bear glazing-down with transparent pigments so well as the white lead in oil: it is apt to absorb the glaze, and also to be moved. There is yet another use made of the process of dragging, which, when skilfully done has a very pleasing effect: it is, instead of mixing two pigments together to make a tint, to drag one on the paper first, and when dry pass the other over it; a mixture is thus made which, while preserving the purity of the tone, gives texture; it has more freedom and ease than stippling or hatching with different colours, and for many purposes in landscapes has quite as good an effect. Should these dragged tones prove too rough or crude, they are easily softened by passing over them such a light and full tint as may be required. By this mode we can imitate the varied, speckled appearance of granite very accurately. If the general tint, for example, be dark in tone and gray, and warmed with little spots of rich colour, we can first lay on a full gradated wash of brown madder and indigo, taking off with a partially-dried brush some lighter portions, which will leave only a general rounded light, without any edge; we may then drag a little brown or purple madder over it, or, if spotted with moss, brown pink; over this again we can take the opaque gray, made with Chinese white and ochre; and after all we may still glaze down with some transparent and warmer colour. The rough bark of trees will be found to give great employment to this process.

ON THE USE OF BODY COLOUR IN WATER-COLOUR PAINTING.—Our readers will perceive that we consider the great and peculiar charm of the English school of water-colour painting is the extraordinary beauty and transparency of the air tints, the refinement and truthfulness of the aerial perspective, and the wonderful brilliancy that our pigments have when the

light of white paper is reflected and modified by passing through them. We are acknowledged to have the best paper and pigments in the world; and our mode of using these materials has hitherto been so successful, that we may be considered to have founded a style of painting no way inferior to that of the Van Eycks in oil or the Pre-Raffaelite painters in fresco. Holding this opinion, we have asserted one leading principle from the beginning to the end of this work, namely, that the best way of using water-colours is to preserve the transparency and purity of the pigments as much as possible; and we consider it of the first importance to bear in mind and try to preserve the light thrown back by the paper to the eye, which ought to be as little injured in its character of brightness as possible by the means taken to represent the forms and colours of natural objects.

When we are, therefore, asked for additional information upon another and, in our opinion, totally different mode of employing pigments mixed with opaque white, we can only refer to the section on the use of Chinese white on tinted papers for rapid sketching, or to the restricted employment of it in the foreground by the process of dragging, scrumbling, &c. Since the publication of the first edition of this work, the use of Chinese white or oxide of zinc has greatly increased; and the constant recurrence to this mode of gaining effects by artists of established reputation, in fact, by nearly all the first men of the school, has doubtless caused these demands. It will therefore be as well if we consider without prejudice the advantages and disadvantages of this alteration of style in the use of water-colours. We will dismiss at once the term *illegitimate*, as sometimes applied to it, as no argument against it,—all pigments and vehicles or materials being available in any mode that can assist by their properties in bringing out the greatest beauty and force of the mode adopted; but before we engraft any new and totally different manner of working on the old, let us at any rate examine very carefully whether we gain or lose in higher and more essential points; let us see if, while increasing our facility, our apparent power, we are not decreasing other qualities that are more important. In language, Trench says, we may have many innovations displacing old fashioned words, but we may not gain in real force or beauty by the change. This we take to be equally true in Art; and we consider it the duty of a teacher, who from

the exacting nature of his employment does not compete in any great degree as an artist, to point out those modes open to objection. In the first place, by the use of opaque white we gain facility, for a broad flat tint without it is not very easily laid; and the laying on delicate tints, and the repeated washings that are necessary in order to secure a well gradated tint, is a very tedious process, while the more vigorous and, when skilfully done, more transparent mode of laying in a gradated tint at once is exceedingly difficult to the unpractised hand. In the first process of repeated and flowing washes we can alter and correct at leisure; but in the blotting-in we must do it at once. Now by mixing Chinese white with our pigments, we can lay on washes or tints, and also touch them again and again, backwards and forwards, with hatching and stippling while drying, and thus secure a flat and gradated surface; we can even return to it again, and lay on further washes or tints. The white also appears whiter than the best white paper; and if we use a slightly tinted paper, as some do, we seem to gain in brilliancy and extend our scale of colouring. As this is an important point, we ought to be quite secure that the white we are using does not alter itself, or affect other pigments. We should make it our first duty (if we want our high lights, our delicate grays, and flesh-tones, to preserve their purity, upon which so much depends) to try whether the white we are thus spreading all over the paper is liable to no change from the innumerable foul gases often not only found but introduced in our houses. Look, for instance, at the quantity of gas burnt in all our drawing and dining rooms and libraries. Ask the librarian of the Athenæum what effect it has upon the bindings of books. See what a change it produces on the colour of papers submitted to it. Are we always sure that the Chinese white, or oxide of zinc, now so called, and made by all colourmen, is not affected by this destructive agent? Does it not change tone when submitted to sulphuretted hydrogen, found so abundantly in many houses? We believe, from repeated trials, that oxide of zinc manufactured by some has still a small portion of iron in it, and that the least trace of that will soon cause the lights covered with it to go far lower in tone, and look far more buffy than pure white paper. In this respect, then, we ought to be sure we shall gain before we employ it on such occasions. Again, when we put on white we

find it absorbs in a great degree the succeeding washes of transparent colour that are passed over it. In fact, it always appears uppermost and opaque; not like white-lead in oil, which when dry is firm, and allows transparent glazing and washes to be passed over it without moving. The white in water-colours, on the contrary, rides up and washes off, and always forces the surface up to the eye, preventing the apparent permeability so important in shadows and skies. For example, compare this delicate face stippled with white added to the pigments, with that stippled with pure transparent pigments: the latter looks like semi-transparent skin pencilled with delicate veins, varied with the blush of the blood mounting up and showing through it; and the former has the appearance of a woman who uses a cosmetic, and dusts her face all over with it, producing a mealy whiteness which will never bear a close scrutiny. Look, again, at this gray-headed man with black beard, worked without white, the high lights scratched, cut, or ripped out, the secondary rubbed out and toned down again with transparent grays. What firmness in the lights! what transparency in the shadows! Whereas one worked with white all through must either be viewed from a distance to have the effect of the air added to it, or else one is in danger, like the Persian ambassador, of accusing the painter of plastering the beard with whitening, or introducing gray hairs instead of light. Look well at Turner's water-colour drawings in the two styles, as they hang side by side in the National Gallery. Compare "Moor Park," done in the early transparent manner, without opaque white, on white paper, with the "Rivers of France," on gray paper, in which body colour is profusely used. Not only is there a truer transparency in the old method, but actually more sunlight and far more reflected light. Once more, let us examine the texture it permits us to give our different distances and substances. Now in our opinion, and also, we believe, in that of many others, the peculiar grain or granulation of a rather coarse paper has always been considered as greatly assisting in giving an appearance of atmosphere—the pure, transparent, palpitating fluid floating over the whole earth; air, as it often is even in moist England, not mist or white fog, or too much vapour. We believe, we say, that the varied prominences and depressions found in this kind of white paper (when covered with transparent tints, and viewed in different

lights, which tints are again varied by being partially rubbed off the prominences, or which have slightly settled into the depressions) produce a play or alternation of light and shade that, combined with hatching and stippling, gives a better representation of the filmy wavy air through which the eye penetrates into space and darkness than the mealy dusty grain of Chinese white even if it does not alter. Besides this, opaque white gives always an appearance of white mist or fog, which one is constantly wishing would be dispersed by a clear sun. It looks like an oil-painting that wants glazing, or a fresco near at hand without that peculiar transparency the charm of water-colours used in the old way. We leave it for others to determine whether colour has greater beauty in the solid opaque condition, or when it is sometimes opaque and sometimes semi-transparent: the larger portion of the natural landscape we consider is best represented by transparent or semi-opaque pigments; and upon a careful examination of the works of all the best masters in the old water-colour school, including eighty of Turner's, in the Art-Treasures Exhibition, at Manchester, 1857, there were not more than eight or ten in which body colour was used all the way through. The last consideration is, the use of white in the foreground, laid on thick or in sparkling touches, tinted with varied pigments, and dragged with separated brush over the surface. In *this* use of it we most decidedly gain: we obtain the fulness and sparkle of convex touches,—a texture varied from the broad smooth stone tints laid on with the palette-knife; the sharp, crisp, silvery light of the birch; the brilliant ripple; or a clean cutting edge against a decided cast shadow. With a brush thus charged, with what ease we can put on or recover high lights of scattered sprays or blades of grass; and with the dusty drag, how may the warm opaque rays of the loaded sunbeam be made to strike through the boughs, or the gravelly beach be varied with cooler tones or grays! Used in this solid form, and in the lights, where we wish for opacity, white gives great force and decision; we may even employ it for a vapoury mist (when charged with moisture it conceals the forms behind): but let us, if we wish to keep to the real beauty and force of water-colour painting, confine it to such uses.

In concluding these general observations, it is as well to remind the student that there are qualities in some measure peculiar to all the different

modes of painting, of which he may avail himself in water colours; thus, from the pencil or chalk he may gain decision of touch, character, and vigour; from oil, strength and richness in the foreground: at the same time retaining all those delicate air-tones so peculiarly beautiful in the department of art forming the special subject of this work.

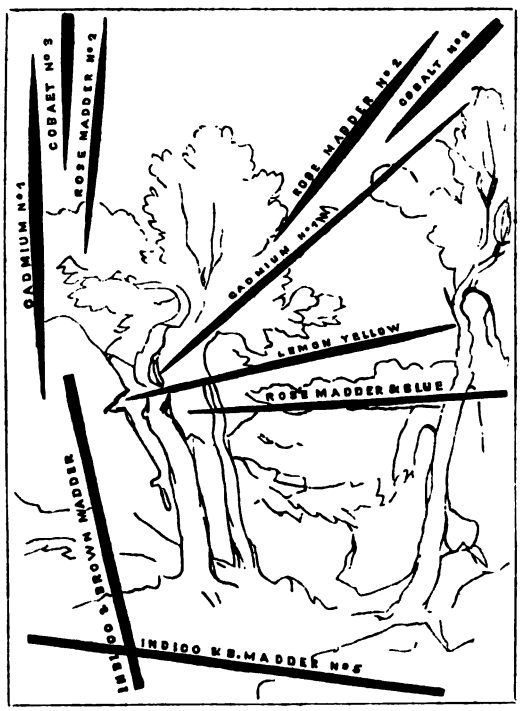
DESCRIPTION OF PLATES.

THE above general directions, indicating the mode of using water-colours by the modern school of painters, were considered by the author sufficient to explain the system he thought the best, more minute explanations being attached to some of the plates. But he has been reminded by some of his younger pupils that other plates seem to require the directions, that are given by the master in few words, made more intelligible by his example before them.

In this edition, therefore, he has added such explanations for studying each plate; and also the answers to some of the most important questions that have been addressed to him. As these have generally been made by intelligent pupils, anxious to learn, he must believe that the work was on those points deficient. Should these additions appear unnecessary to those who are more advanced in art, or who have the advantage of good instruction, they are requested to pass them; and having no necessity to engage in the labour, they will study examples from nature that will be in their case more suitable. We will begin with notes on the working of Plate 1.

PLATE 1.—Among the numerous questions that are asked by pupils, perhaps there is none more difficult to answer by words or writing, and yet more easy to demonstrate by example, than how to lay the gradated tints in a clear sunset-sky, and the order in which they should be executed. The explicit directions so necessary to render this process clear to the beginner become exceedingly tedious to those who have overcome the difficulty; as well might one expect a lad, after a year's study of Euclid, to go back and trot patiently over the *pons asinorum* with a dull companion. Still, at the risk of being tedious to some, the author will attempt to explain by a diagram the mode in which the frontispiece of this work has been produced. It is intended to repre-

sent a clear sunset-sky, seen from an eminence, in a dry flat country, as the Forest of Fontainebleau. To obtain that clearness and pure aerial effect, the pupil must begin with more delicate pigments than yellow ochre and madder; rose madder and cadmium would be better, laid on very broadly, and when dry washed off until the stain is scarcely perceptible. When this again is dry, or merely damp, begin with cadmium represented in degree of strength by stroke No. 1 in the diagram, commencing with a light tone on the land, and gradually increasing the strength from a wash prepared in a saucer, for this is better than taking the colour direct from the pigment; as the brush passes from the vicinity of the sun, take up water and reduce the strength of the colour until under the blue it becomes scarcely perceptible; the tone will then be in proportion of the mark 1. If this is not regularly gradated, or not sufficiently powerful, it can be repeated, or when quite dry washed over with pure water, and equalised by washing some portions more, some less. Then take pure water in your brush, and introduce the rose madder No. 2, increasing the strength by degrees, and diminishing in the same way as the cadmium. Should the tone appear too coloury, a slight wash of Venetian red may be necessary. The cobalt blue, No. 3, is introduced in the same way, only that it is increased in strength until it reaches the boundary line. Should the cadmium appear too strong or positive near the sun, and not quite bright enough, part may be taken off by wetting it and rubbing it with the painting-rag. Over this light may be put a delicate wash of Indian yellow, Naples yellow, or lemon yellow. Scarcely any of these sky-tones diluted,



with the exception of the blue, will be out of place over the landscape, indeed, they all tend to harmonise the whole; but as the whole of the foreground and rocks are darker than the sky, some more powerful gray is requisite. When, therefore, the sky is quite finished, but looking rather stronger in tone than it should, put a full rich wash of indigo and brown madder No. 5, varied in parts with yellow ochre or sepia, over the whole of the rocks, foreground, and trees in the middle distance; this will secure a subdued and yet harmonious tone. Over this broad tint may be worked others, varying from rich russets, made with madder, burnt sienna, and yellow ochre, to greens composed of brown pink and indigo, or gamboge and sepia. As the foliage of the juniper is of a gray, dusky hue, and in this instance has little or no light directly on it, the pupil should mix up a tint in a saucer of indigo, gamboge, and crimson lake, and try it on the margin of the drawing previously; he will then see if it is sufficiently strong, and observe whether the sky-tones are powerful enough when opposed by the forcible tones of the tree. Should the whole sky appear feeble, he may float on more colour in the following way. Turning the drawing upside down, he will begin (not touching the rocks, which have a firm dark colour on them) on the first tints of yellow with pure water, and then take up if necessary a little rose madder or Venetian red, keeping his brush full so that the wash flows. When he has added enough of these tones, he dips his brush in the water, and by dragging it back over the edge of his glass a portion of the warm colour is left behind; and now an equal quantity of blue can be added, the brush being always kept full, and the whole sky floated with a varied wash. If the sky when dry is not nicely gradated, the colours being firmly fixed on the paper, the pupil can wash the whole over with pure water, and then proceed to float on the different colours necessary to complete it.

PLATE 2. THE SPECTRUM.—One of the most useful practices that a pupil can have is to learn to gradate colours. To lay a flat tint, to gradate from light into dark and from dark into light, have already been described in the handling of the brush, the colour used being sepia alone. Now the student of colour must learn to pass from one colour or shade to another without difficulty or degradation; for there exist in nature such continual changes

or gradations, that he must also learn to change not only the depth of his tone, but the colour itself. The spectrum produced by the prism affords us the most perfect example for this study, and we have generally the opportunity of seeing it when we like; we should therefore study it well, accustoming our eye to the purest and most charming example of colouring. To copy the spectrum, you must learn to float or blot one colour into another, or pass from shades to others either lighter or darker. Observe, to do this you must keep simple in your pigments or colours, not mixing a tint and then blotting that in, but taking up one pure pigment after another and letting them float into each other; then as the particles lie side by side they have more transparency. Prepare by rubbing up carefully from cake colours the following eight pigments in different saucers,—carmine, orange orpiment or orange de Mars, cadmium, lemon yellow, emerald green, ultramarine or cobalt, Prussian blue, and rose madder. The tints you have rubbed up should be nearly the thickness of cream, having ready a sheet of white paper well stretched on a frame or board: if on a frame, you can damp it behind, and keep it damp; if on a board, you must damp it after the outline is made. You must mark off on the side of the outline the space that each colour is supposed to occupy. You now begin with the full strength of the carmine at the top; and after passing along in horizontal spreads, allow it to run a little down: then take up another brush filled with orange orpiment, pass it through the little pool of carmine, and make a tone of reddish orange—let it come a little further down the paper; wash the mixture out of the brush, refilling it with the pure orpiment, not weakened with water, but the full strength—take care it goes over the whole of the middle portion of the orange pure: then take up another brush with the cadmium; and thus with all the colours. The great art consists in not allowing the pigments to float too much into each other, but just sufficient to produce the gradation; a slight slope in the position of the drawing-board much assists. As the violet is darker than rose madder, it must be passed over Prussian blue or ultramarine previously laid on, or else mixed beforehand with ultramarine. It is good to endeavour to keep to the exact size marked out; but if it is intended to cut out the spectrum and paste it on black paper, you can go beyond the boundary outline. If you find this blotting-in very diffi-

cult, you can copy the diagram, by using a succession of bands, thus: lay on a light flat wash of the carmine a little past the whole width that the red should occupy; then when dry, another, but only four-fifths of the first; again others, lessening in width every wash. Afterwards the edges of each of these washes must be melted or gradated into each other by careful stippling with the pure colour, but of differing degrees of strength.

PLATE 3.—Besides accustoming the student to judge of the relative power of the primary and other colours when placed side by side, or when in opposition, these diagrams are useful in giving clear and distinct ideas of colours; and the practice that he has in copying them is very useful. As in music he at first strikes each note distinctly and firmly to acquire a good masterly touch, so likewise should the earnest art-student take this important practice. Moreover he thus gains neatness and decision, and a thorough knowledge of what is meant when he says red, yellow, blue; and beyond this, he knows which are primary, which secondary and tertiary, and how they are made. Should he afterwards like to become acquainted with these colours when weakened with water into washes, he would do well to make other and larger diagrams; always, however, setting a watch on himself that he does not mix pigments at random, and that he does not gradually become muddy and indefinite. This practice will also facilitate his endeavours to imitate the much more delicate and difficult tertiary tints he finds in nature. The pigments used have been: for the primary, carmine, chrome, and cobalt; secondary, orange orpiment, Hooker's green No. 1, crimson lake, and French blue; tertiary, citrine, brown pink, and Prussian blue, russet, crimson lake, French blue, and orange orpiment or orange de Mars, olive, crimson lake, French blue, and Hooker's green. In the tertiary tints, we must ever remember one primary must always be predominant; thus yellow governs in citrine, red in russet, and blue in olive.

PLATE 4. HARMONIOUS ARRANGEMENT OF TWENTY-FIVE OF THE MOST USEFUL PIGMENTS.—The earnest and industrious student will not be surprised if asked to copy with fidelity the whole of this arrangement of pigments. If he demands, for what purpose all this useless mechanical labour? he should be told, that by copying it carefully he will acquire great dexterity in handling his brush; so that he can begin and end any tint with

precision. He will also learn to gradate colours; to leave off at the boundary lines with firmness, yet without heaviness; to do all this with the greatest purity of tint; and lastly, he will become thoroughly acquainted with the appearance and qualities of each pigment, and with its colour in diluted and intense degrees, as it stands alone and as it appears when surrounded with others more or less differing in brilliancy and force: he will see the whole group as they appear, surrounded with white and then with gray. He will find a thorough acquaintance with the pigments he uses exceedingly valuable in his after-progress. Few, even the most practised, can judge of the tint or colour of any pigment while it is in the powder, cake, or moist pan. Although in some of the lighter pigments the relative power is indicated, all are obliged to try them with water on paper; so that he is only doing what hundreds of artists are every day. This knowledge, once attained, will make the succeeding practices of mixing tints very much easier. To copy it neatly, a rule, compasses, and ruling-pen are used. Taking a well stretched piece of rather smooth paper, he strikes a very delicate perpendicular line: on this he measures the length; this he divides in half by a point in the middle. He then rules another line at right angles to the first, and measures the exact width. He now draws the lines completing the diamond form, and rubs out with great care the first upright and horizontal lines. He then divides each side into five; and when lines are drawn from these points intersecting the whole, he finds he has twenty-five diamond forms to fill up. For this purpose he uses cake-colours. He is also careful that he gets pure genuine pigments, each being a good type of the colour of the pigment; for they not only differ prepared by different colourmen, but even from the same house at various times. Thus yellow ochre is sometimes dull and heavy enough for Roman ochre; sometimes tinged with citrine, so as to be like raw sienna. Cadmium sometimes too much resembles chrome; it should be far more luminous for its strength. Red, again, may be too yellow, too much like light red. Rose madder will appear pink, and very opaque and feeble. All these differences he will study. Having rubbed up a small quantity of each pigment of the same degree of consistency in saucers, he fills his brush with lemon yellow No. 1. As he cannot get the full strength of the

concentration of this or any of the other examples at once, he must leave it to dry, and proceed with Nos. 4, 5, 6, which do not touch the first; then he takes the next row but one, raising a row each time to avoid their running into each other. When he has obtained the full strength he observes in the examples, he proceeds to finish them, by dappling on, in some such manner as this, small strokes of pure intense colour, until he brings the last touches to somewhat the appearance of the pigment in cake; but he must see that he has colour even in the darkest part, and each must be known and felt as very different from black. This dappling has been explained in other places: it is an excellent mode of obtaining an increase of power without opacity, the eye passing through these little flakes or films of colour with great pleasure.

PLATE 5. CHALK-DRAWING ON TINTED PAPERS.—Described in the Section on "Paper," p. 67.

PLATE 6. ON THE HANDLING OF THE BRUSH.—Described at the beginning of this Section.

PLATES 7 and 8. ON AERIAL GRAYS AND SKIES.—Described in Chapter IV. Section I.

PLATE 9. LAKE OF BRIENTZ is another sunset; but few directions will be necessary after those already given. Still, as there are lighter fleecy clouds of a rich orange or golden tone, relieving from the blue, it may be as well to add some description of the plate, and mode of working. The first tints are nearly the same; yellow ochre or cadmium with rose madder, slight washes of gamboge near the sun, but not passing at all into the blue or the distance. Venetian red and vermilion in very small quantities have now to be introduced; and the water is principally warmed with washes of raw sienna. The student should be aware that the rich golden colour of the clouds is not passed over the whole of the sky, and afterwards cooled by the blue. The warm parts of the sky are left much cooler than they would be when finished; they are then touched on the side opposite to the sun, or their shadowed side, with a warm gray, made with the blue that remains in the brush and a little Venetian red or crimson lake. If this is done while the blue is damp, the edge of the cloud melts away into the blue without any

perceptible form, and produces a very natural effect. The brush is now washed well out, and the light side of the clouds is subdued with small portions of pure warm colour, as cadmium, rose madder, &c. The purply gray of the dark mountain is now put in with a full brush, and the tint may be carried without reserve over the portions of the near mountain that are in shadow, and over the principal part of the group of trees, shed, &c., in shadow. As a rule, however bright the sun may be, the shadowed side of objects projected on it should in a great degree lose their local colour, and either become neutral, or have a little of the compensating colour in addition. Thus, if the sunset is yellow, the trees should incline to purple; if orange, to blue; if crimson, to a deep green. The tree, however, in the foreground, may have more of the natural warm colour given to it; for being near, and the foliage more separated, the warm light may be sent through the leaves, and become yet warmer with the rich colour of the autumnal green.

Those correspondents who have addressed the author on certain difficulties, will find their questions answered in the following notes:

Question 1.—"When desired to sketch a view in which the only visible colours are cool green, blue, and gray, how may they be used or arranged so as to form a cheerful picture?"

This question is, we think, answered in Chapter I. Section III., "On the Harmony and Natural Contrast of Colour," where the powerful effect of a predominating light is described; but as a further illustration of this subject, we may instance many a cheerful Swiss mountain-scene, which, on a careful examination, will be found to consist entirely of cool green or gray, with a blue sky overhead and snow-clad mountains in the distance, with little or no vapour or mist to disguise or blend the colours. Our first object on sitting down to such a scene should be to ascertain whether the effect be really *warm;* for cheerfulness may exist with a very slight degree of warmth. Suppose a bright morning effect, the green trees and gray rocks flooded with light—this will make them appear to lose some portion of their positive colour, and, by clear cast shadows, may be made to look cheerful. The great charm of such a landscape will be principally in the warm, delicate, aerial effects in the different distances; while fleecy clouds, breaking up the blue, partially hiding the snowy summits of the mountains, and passing in and among the fir-clad lower range, will give harmony to the whole. One or even two of the three colours named will doubtless be subdued; for to have all three equal in depth and intensity

would not be harmonious. But even in such a landscape as the one just described, or a wild moorland scene in Scotland, consisting almost entirely of these cool tones, a small portion of bright and cheerful colouring in the foreground, as a group of figures, in warm and harmonious colours, suffices to give to the whole an impression of cheerfulness and even warmth. If it be possible to choose the time of day, —to take, for instance, sunrise or sunset, and have warm rays of sunlight, of some predominating colour, thrown across the whole picture,—it will at once be seen how the cooled local tints may be converted into rich and glowing colours. Care, however, must be taken, in depicting landscapes of countries where the general tone of colouring is cool, as in Norway, Switzerland, or Scotland, that we do not lose the truthfulness of nature, and, by too great an avoidance of cool colours for those that are doubtless more agreeable, become monotonous. Great beauty exists in cool colours; and certain kinds of neutral gray are so refreshing to the eye, that they are chosen to set off and enhance all other tones.

Question 2.—"In what position is it proper to introduce pure primaries? also white and black."

For the consideration of this important question, as far as regards historical and figure subjects, our correspondent is referred to the words of Sir Joshua Reynolds, Burnett, &c., as far better authorities; we confine ourselves to its relation to landscapes. Pure primaries are very rare in landscapes (*vide* Chap. I. Sec. II.), being chiefly reserved for the sky and figures. The great mass of blue in the sky, if managed with care and delicacy, does not attract more than its proper share of attention; but a small quantity of a primary, or of two or more, harmoniously arranged, produces a brilliant effect; and their value is of course greatly enhanced by the judicious introduction of black and white *near the eye*. Even in this case we believe it to be the rule, that one of the two, or two of the three, should be reduced in importance, either by subduing it or them in intensity or quantity. It is scarcely necessary to add, that black must be strictly confined to the immediate foreground.

Question 3.—"Is it proper in any case to bring a primary into immediate contact with its complement?"

When it is the desire of the artist to give the greatest possible effect to the colours, they may very well be placed in juxtaposition; we have then the additional power of the complementary colour, not perhaps so distinguishable as it is in the large diagrams at the end of the volume, but still giving more effect to the primitive colour. This also occurs, though in a less striking degree, when a tertiary and complementary tint are placed in juxtaposition in the middle or extreme distance, as when a yellow-toned corn-field is contrasted with a purple distance, or a newly-ploughed and red-toned field with green of various tones.

Question 4.—"What is the colour of shadow? is it gray, or a deepening of local colour? or is it complementary? Is it influenced by the colour of the light by which it is cast, and the time of day?"

Colour is not distinguishable in darkness; it requires a diffused daylight to bring it out in all its force. Shadow must, therefore, be represented by more neutral tones than the natural colour of the object. A deepening of the local colour is not sufficient to produce this neutrality or repose; the mere deepening or strengthening the colour of a sand-bank (p. 30) would not suffice to represent the degree of neutrality as well as balance that there is in shadow. There is a sort of reaction in the visual organ after strong excitement; yet we must not yield to this too much, and proceed to the other extreme by the immediate employment of the complementary tint without any regard to the natural or local colour; neither will it do to use a perfectly neutral gray or subdued black, such as is produced by chalk or charcoal. No—it must have a compensatory effect, and yet contain a sufficient amount of the natural colour to unite the two. To make the whole effect depend on the mere complementary colour produced by the retina, would be to ascribe too much power to this cause; to ignore the effect entirely would be to lose many additional charms. The colour of the shadowed part of an orange is a different tone to its cast shadow on gray paper; the orange tone is not all lost, but its degree depends on the brilliancy of the sunlight. The shadow of a rosy cheek is often slightly greenish, owing to the complementary effect; but there are other causes that influence this delicate study. These are, the gloss or oily smoothness of the skin; the almost imperceptible down with which it is covered, but which produces a grayish tint; and the semi-transparency of the surface skin, showing the light through, as well as the blue veins, whether in light or shade. This effect of transparency or transmitted light has considerable power, as may be proved by tearing an orange in half, and looking at the pulp in shadow and in light—the deepest colour will still be deepened and grayed orange or crimson. The same with the shadow between the petals of a rose, or between rosy fingers, which no one would think of painting green. The colour of shadow must therefore be influenced by the part in light and the colour it assumes; and as the time of day has a decided effect on the colour of light, this also must be considered. It has been explained that the colour of shadow is affected by the local colour on which it falls; and to understand this better, suppose we examine a mass of gray rock in sunshine, lying on a rich-coloured gravelly beach, we find the cast-shadow on the warm beach much warmer than the simple shade, with the strong reflection of the colour of the beach added to and overpowering the natural tone of the rock, while the cast-shadow is not acted upon by a return of such colour, but has only the side of the gray rock to reflect a small quantity of cool light on it; it is also placed in such a position that it reflects the cooler tints of the sky or clouds. The shaded part and cast-shadow of a similar mass of rock, lying on another instead of

the glowing beach, will be visibly cooler; so that it will be evident that the colours of shadows are hard to define, being influenced by a great variety of circumstances. Let us carefully notice all the circumstances affecting the colour of the subject we are drawing. If we can understand them, so much the better; if not, nature must still be copied as closely as possible. All we can say is, that the colours in shadow are neutralised, and that if the colours of the object are strong and in sunlight, we must indicate their compensating colours. Doubtless reflections are very serviceable in blending and harmonising strong colours.

Question 5.—"In what part of any object of uniform colour is the colour richest? nearest to the light or to the shade?"

If the object be uniform in shape as well as in colour, *i. e.* if it be a plane flat surface, the tone will appear brightest when it comes in contrast with the darkest and most complementary colour in the background; but if it be a rounded surface, the colour will appear deepest and richest as it merges into the tones of the shade: and in this case, in or near the highest light it becomes powerless and nearly white; and in the shade, powerless as regards colour from alteration of tone and complementary effects.

Question 6.—"What is the difference between shade and shadow?"

Artists consider that to be shade which is not in light, but shadow is projected shade or cast-shadow. There is, however, much looseness in these terms, shade being often used for the shadow of an object, as "sitting in the shade of the beech-tree." Much of the feebleness of ideas of nature and art is derived from the obscurity of the terms employed by careless writers. For instance, take our old friend Æsop, who is made to say, "A dog passing over a brook, with a piece of meat in his mouth, saw his shadow in the water," meaning, saw his *reflection;* his shadow cast along the surface could not surely have troubled him.

Question 7.—"How may one give the effect of a bright colour at a distance?"

As all coloured objects lose in power at a distance more than our pigments do when placed on a canvas at the same distance from our eye, the effect must be given by comparative power and lightness. However bright or strong the colour you wish to represent may appear, it would not be advisable to use the same pigments in the distance that you do in the foreground. If we take gamboge, Indian yellow, or Vandyke brown,—colours or pigments all truly representing objects close at hand,—merely adding water to these and rendering them weaker will not suffice; we must alter the colour, either by adding some other pigment to it, to render it grayer and more aerial, or by substituting another pigment for it of the colour that

the objectionable one would appear at that distance from the eye. These may still be made to appear as bright as they could naturally be; and to do more would only make the picture appear tricky and artificial.

Question 8.—"How may colours be arranged so as neither to look dingy nor conspicuous as positive colours?"

First, As regards the colour of our pigments, to prevent their looking dingy. Pay attention to the mode of working. Do not mix more at a time than is necessary: at every additional mixture clearness is lost. Avoid using pigments that have a tendency in an opposite direction to the tone you want. Be careful not to lay wash over wash without meaning; for the effect will certainly be muddy neutrality. Turner is said to have produced some of his most pearly and aerial effects by laying the three primitives in washes one over the other. In this practice much of the purity of the tone would depend upon each of the pigments being true; for if the blue, for instance, had a tendency to yellow, or to reflect the yellow rays, and the red the same, confusion or muddiness must necessarily arise. One colour or tint may also cause another to look dingy, even when it is by itself pure and good: thus two reds, rather differing in strength, but of the same quality as to tone, will render each other dingy—they should be strikingly different as to strength to give each other effect; the same with greens. By want of care or thought in placing colours, or in selecting those that are before us, we often render our landscape dull and ineffective. To escape dinginess, lose the light of the paper as little as possible. Avoid the use of opaque colours one over the other. Beware of mixing blue, yellow, and red pigments in the same wash, as these will not, like the blue, yellow, and red rays of the prism, tend to produce white, but muddy gray. There is a little philosophical toy of a wheel having these colours painted on it, which is made to revolve with great rapidity. Some, thinking these colours are the same as the coloured rays of light divided by the prism, have positively asserted that it made white light,—an utter impossibility for coloured pigments to accomplish: they only mix together in the eye, and produce gray. But enough has been said on this subject in Chapter I. Section I.

To prevent any one colour from becoming conspicuous, it must be harmonised into others by gradation, and not be too violently contrasted by complementaries or inharmonious tints. A colour out of harmony may be quite as conspicuous, if not more, than one contrasted with its complementary, only the effect will be disagreeable instead of agreeable. A colour becomes conspicuous when it is decidedly unnatural or out of place, as blue on trees, or pink on walls. So in the human face, the same amount of colour which placed on a lip is scarcely noticed, if removed to the nose becomes strikingly conspicuous. A single spot of colour in a landscape may often appear too prominently unless repeated by other smaller and more broken portions.

Question 9.—"How can I get more effect and variety of colour in my sketches, such as one sees in those of artists?"

It appears, by a general review of your sketches, that you have been studying too much from small lane and close scenes, and under trees; such spots are very tempting, as they are cool and retired. You have laboured with great care to make pictures in circumstances that require much art and knowledge. The small, niggling copying of different shades of greens, with varying reflecting surfaces, is not what you want for the study of colour; nor are all these close studies productive of breadth and variety. First, for effect, change the time of your studying: instead of going out about nine or ten, and remaining out till five or six, go out when the sun rises, or soon after; see the delicate pearly mists and grays of the morning, and the various colours that light up the clouds; and note the shadows as they retire from the rising sun. Keep in-doors all the middle of the day in summer; occupy yourself with something else,—read, write, or dine; but be sure to be out and at a favourable spot about three hours in the evening, when the shadows are lengthening, and try to study and catch the glorious beauties of the setting sun. These are the times for you to see the most variety. Avoid shutting yourself up too much in broken weather; go out with your note-book in showery and stormy seasons; look up at the sky more, and less on the grass. If you can change your locality, go where you can see different distances and broken ground, mountains and rocks, and mark the effect of the passing shadows on them; then drop the minute study of delicate spots of colour, and try for breadth of different tints,—the purple tints of the heather-mountain in shadow against the rich yellow beach or gravel of the foreground. Blot it in; if not pure and clear, blot it in again with different pigments: these studies will be the most useful and improving.

Question 10.—"Is any colour more particularly to be avoided than another?"

Every colour, as well as thing, is good and useful in its right place; it is only the excess that is disagreeable or hurtful. Some sooner appear unnatural or stronger than others. Ruskin says, "purple is vicious;" another, Indian yellow; another, brown madder. A constant recurrence to any one favourite pigment or tint for effect is apt to beget mannerism; it then becomes worse than useless, it injures instead of improving, like the oaths formerly so prevalent in conversation.

Question 11.—"Is it right to paint water as blue as the sky reflected in it? Are reflections of objects in water ever as bright as the objects themselves? Are reflections the same size and form as the objects?"

The strength of every colour, as well as light, is greatly subdued by reflection; the blue of the sky, therefore, will be generally altered by a loss of power, as well as by the additional colour of the water; for we may look some way into water, and

it is rarely without some colour slightly differing from the object reflected. On the extreme summit of the ripple this will not appear; but when the light comes through the shady side it is coloured, or when the water is shallow and the colour of the bottom is reflected through it. If the reflection be at the same distance from the spectator as the object, it will appear the same size; but if the position of the spectator be such that all the object can be seen and only a portion of the reflection, as when the spectator is placed high above the reflecting surface, like the view from the Righi where the base of the mountain is all hidden, of course the object will appear only partially reflected. But if you are painting a portrait of a friend and his reflection in a looking-glass, the life and the reflection being the same distance from you, then the size should be the same: if the reflection is furthest off, it must be diminished in the regular proportion; but the colours in the reflection will be much feebler, and perhaps influenced by the local tone of the mirror or reflecting power, whatever that may be. There is one simple fact about reflections that the young artist should always bear in mind. When a perpendicular object is reflected in a glass hanging at an angle from the wall, say an angle of 10°, then the reflection will be at an angle of 20°, for the angle is always doubled; the surface of the glass is 10°, but the reflection is 20°. This will make an apparent incongruity between the two forms: but any one who looks with care into these things will observe the truth; and one great truth like this is much better than a great many little truths of minor importance.

Question 12.—"Why do artists so often introduce into their pictures the red cloak and blue kerchief so prevalent in many of the rustic districts of England?"

Every one has heard of the good effect of a little bit of red contrasted with a large quantity of green. It is, in fact, so well known, and so much used, that it is not advisable to employ it too often. Blue, as a piece of positive colour, gives force and life to a picture, and serves to repeat the blue of the sky or distance. Of the two, red would appear conspicuous the longest in the distance; the blue contrasted with the warmer tones of the foreground might be made the most striking.

Question 13.—"How shall I avoid the crudeness and want of harmony which characterise my most careful studies from nature?"

Do not be too anxious to soften or tone down these asperities, they are faults on the right side; these studies are promising, much more so than the delicate, softened copies that formerly gave so much pleasure to your friends. You are now trying for exactness and truth in colouring, for purity and variety of tints. As you copy each tint in turn from nature, you will no doubt make each too positive, and they will have a harsh, overbearing character. Persevere, one will correct another; but

if you would wish to see how soon pure mixtures of well-arranged tints are blended and harmonised, take a large sable brush and water, and beginning with the sky, wash it all over, taking out the hard edges and spots. Let the wash, if clear and pure, float over the distance, and thus it will become more united and aerial. Continue the washing, so that the crude greens are subdued; float on a little pure gray, and in the middle distance a good breadth of warm gray, of brown madder, and indigo. Stop there at the broken line of the foreground, and when it has dried you will find your sketch is put together; in fact, it is all in harmony, and yet powerful.

Question 14.—"How is it that, in trying to get true and vigorous colour in my studies from nature, I always lose not only the light and shade of each object, but the general effect of the whole?"

You do not yet seem to comprehend that the colour of any object is subordinate to light,—by light I mean clear sunlight. If you could thoroughly understand and see this great truth, you would ever afterwards give to each its just value in your pictures. To convince yourself, take a piece of black cloth or silk that is not glossy, and a white sheet of cardboard glued on to a millboard so as to make it perfectly opaque; put the black cloth in the sun, stand the cardboard upright on it, so as to obtain a good effect of it in shade, and a determined cast-shadow on the cloth. Now copy the whole, with conscientious adherence to the truth, as you see it. The cloth in the sun will be nearly white, or a very slight gray, the board very much darker, but the shadow on the cloth the extreme depth. Always keep in mind that you have but a limited power to represent light. Our pigments are as bright as the objects themselves; but when we represent light with white, we fall infinitely short of the real effect. Again, if we paint black cloth black in sunlight, what do we reserve of power for it in common daylight or in cast-shadow? Think of this, and paint your local colours as you actually see them, and not as you know them to be in other situations. Use them as Polonius intended to use the players, as they deserve; but keep them in their proper place. Your next study should be a few good red bricks, in different positions and lights. If you can group them amongst some burdock or rhubarb leaves, you will have an opportunity of seeing and studying sunlight on red and green surfaces without any gloss, and with a certain degree of reflective power; you will also see the effect of reflection in modifying and harmonising colour. When you afterwards paint the trees and rocks you find in nature, you will certainly be more truthful for these studies. There is yet another reason why your foreground studies of foliage appear so heavy and positive in colour: light of a cool retiring character is not so attractive to the eye as rich warm colour in shade; the colour is so pleasing, that the eye loves to rest upon it in preference to the cool gray light. For example, the leaves of a vine on which I now look have great reflective power,

and though in light, should be painted, not green, but a gray blue; while those in shadow, through which the sun partially shines, are a beautiful green, and, owing to their colour, attract the eye more than those in light: but as colour is in most instances turned into light and shade by the photograph, we must examine this subject copied in this way, and we shall then see the lights will be exceedingly prominent. We have in reality to go through a very careful course in our first studies from nature. No artist, not even Turner, could reckon the just value of every light, shade, or colour he saw in nature at his first attempts. It is so utterly impossible to imitate light, that we have the greatest difficulty in adjusting our scale to our diminished power. If we are too sensitive to any loss of light, we are in danger of becoming feeble; if we are too eager to gain force, we are led unawares into blackness.

Question 15.—"In the last study of trees you made before me, I observed you did not use such a simple mode as you have hitherto recommended. May I ask why?"

I will tell you with pleasure; for you are well aware I have no secrets: indeed there ought to be no reserve in such matters between master and pupil, excepting such as is positively for the benefit of the learner. Every one, on first attempting the study of any art, must try and acquire the most simple method, learn to do things in a firm and decided manner, and must therefore adopt those processes not perhaps the most effective, but where there is the least chance of failure. If the difficulties are all presented to pupils at once, and they fail at first to overcome them, as most likely they will, then they are so discouraged that they never have the resolution to begin in the slow careful way again. I advised you to lay a broad flat tint of green on the tree, attending only to the outline edge, and then another of a different shade for the shadow. In the first attempts you had quite enough to do to keep the general form, the purity, flatness, and same strength of the tint. In the shadow, you had the additional difficulty of leaving the lights convex, in fact, of keeping the lights always in your eye at the expense of the shadows. Until you had acquired this power, it would have been of no use to tell you you might blot-in your colour more freely; that in the highest lights you might use the colour a little cooler; in the shadows you might take up more indefinite greens with much more power, melting or running one colour into another; or that the whole tone of the lower part of the trees might be cooler and deeper,—that here you might take a little more yellow, more red, or a different blue. All this, told you at the beginning, would only have confused you. Having so many things to attend to, it would only have ended in a sad muddy shapeless blot. But now you can manage your brush, and lay tints flat or gradated. Knowing well the nature of the different pigments you use, I wish you to do it as I did; and if you do not succeed the first time, try again until you do.

Question 16.—"How is it that my studies, made with far more attention and labour than formerly, with far greater knowledge of nature and the art of using my materials, do not either please myself or my friends as much as my earlier sketches?"

Place your sketches made ten years ago side by side with those you have just completed; compare them well; look at them if you can with the eye of a stranger. Do you not perceive the amazing difference? There is no life, no reality, no soul in the last, laboured though they be; they are veritable landscape Frankensteins; all the higher qualities are wanting, but all the lower and earthly are brought prominently forward. Now, turn to the first. Here they are slovenly in drawing, not always correct in light and shade, and very often false in colour. But how widely different! You were young in life and art then, full of feeling, quick to seize ideas, rapid in execution, not overburdened with knowledge and rules; you walked with nature like a child, and represented her in as simple a manner. Nevertheless, don't be discouraged. Let us examine what has led to this great change in ten years. In that time photography and the Pre-Raphaelite school have sprung up; and from the profusion of minute studies of nature thus always before the eye, every one has been led to demand more careful and truthful work in artists' drawings. This the Pre-Raphaelite school has endeavoured to meet by increased labour. The result is evident all over the walls of the Exhibition. But this is not all; photography tends to discourage, as well as to advance Art. When two young amateurs go out to study nature together, one of whom uses the machine, the other his brush and colours, we can easily see that he who can produce five or six finished and truthful studies will at the end of the day think, and without fail say, that his friend, who has not yet completed his first study, is decidedly slow. We, however, think that a careful study, with all the beauty of colour, light and shade, and a selection of form, is far more agreeable than that in which a multiplicity of detail alone is given. Hear on this subject the opinion of a clever writer in the *Quarterly*, No. 202, which we here quote: "It is obvious that, however successful photography may be in the closest imitation of light and shadow, it fails, and must fail, in the rendering of true chiaroscuro, or the true imitation of light and dark. And even if the world we inhabit, instead of being spread out with every variety of the palette, were constituted but of two colours,—black and white, and all their intermediate grades,—if every figure were seen in monochrome, like those that visited the perturbed vision of the Berlin Nicolai,—photography could still not copy them correctly. Nature, we must remember, is not made up only of actual lights and shadows: besides these more elementary masses, she possesses innumerable reflected lights and half-tones, which play around every object, rounding the hardest edges, and illuminating the blackest breadths, and making them sunshine in a shady place, which it is the delight of the practised painter to render. But of all these photography gives comparatively no account,

The *beau-ideal* of a Turner and the delight of a Rubens are *caviar* to her. Her strong shadows swallow up all timid lights within them, as her blazing lights obliterate all intrusive half-tones across them; and thus strong contrasts are produced, which, so far from being true to nature, it seems one of nature's most beautiful provisions to prevent." Again, speaking of the inferiority of the face to the dress of figures, the writer remarks; "The first principle in Art, is, that the most important part of a picture should be best done. Here, on the contrary, while the dress has been rendered worthy of a fashion-book, the face has remained, if not so unfinished as before, yet more unfinished in proportion to the rest." There are also far higher qualities required to make fine works of Art than the most successful photographer can supply; and even could the photographer render the colours as well as the light and shade of nature, could he at all compete in the production of real works of Art, which must be the result of the mind, and not of the skilful manipulator alone? But these ideas are much more powerfully expressed by a great student and lover of nature, who uses not only photography and his pencil, but his pen, to paint the beauties that he sees. In *Two Years Ago*, Mr. Kingsley makes an artist say, in answer to a friend:

"Not paint what is there? And you are the man who talks of Art being highest when it copies nature."

"Exactly. And therefore you must paint, not what is there, but what you see there. They forget that human beings are men with two eyes, and not daguerreotype lenses with one eye; and so are contriving and striving to introduce into their pictures the very defect of the daguerreotype which the stereoscope is required to correct."

"I comprehend. They forget that the double vision of our two eyes gives a softness and indistinctness and roundness to every outline."

"Exactly so; and therefore, while for distant landscapes, motionless, and already softened by atmosphere, the daguerreotype is invaluable (I shall do nothing else this summer but work at it); yet for taking portraits, in any true sense, it will be always useless, not only for the reason I just gave, but for another one which the Pre-Raphaelites have forgotten."

"Because all the features cannot be on focus at once?"

"O, no; I am not speaking of that. Art, for aught I know, may overcome that; for it is a mere defect in the instrument. What I mean is this: it tries to represent as still what never yet was still for the thousandth part of a second—that is, a human face; and as seen by a spectator who is perfectly still, which no man ever yet was. My dear fellow, don't you see that what some painters call idealising a portrait is, if it be wisely done, really painting for you the face which you see, and know, and love?—her ever-shifting features, with expression varying more rapidly than the gleam of the diamond on her finger,—features which you, in your turn, are looking at with ever-shifting eyes; while, perhaps, if it is a face

which you love and have lingered over, a dozen other expressions equally belonging to it are lingering in your memory, and blending themselves with the actual picture on your retina: till every little angle is somewhat rounded, every little wrinkle somewhat softened, every little shade somewhat blended with the surrounding light, so that the sum total of what you see, and are intended by Heaven to see, is something far softer, lovelier,—younger, perhaps, thank Heaven!—than it would look if your head was screwed down in a vice, to look with one eye at her head screwed down in a vice also?—though even that, thanks to the muscles of the eye, would not produce the required ugliness; and the only possible method of fulfilling the Pre-Raphaelite idea would be, to set a petrified Cyclops to paint his petrified brother."

Having thus pointed out the too great reliance on photography,—for it is not only now made to furnish studies to refresh the artist's eye or aid his memory, but it is supposed to take the form and arrangement of the subject better from nature, while he humbly tints in the colour,—we will observe what effect this straining to compete in these details with photography has produced on your studies. That we are almost all naturally idle, is quite true; to think strongly and deeply fatigues us, especially as we advance in life—we search for somebody or something to relieve us: now this photography appears to do but does not. You must therefore endeavour to return to the feeling and respect for the higher qualities in nature that you had when you first studied.

Question 17. "How is it that I, who see so much of the finest Nature and Art, who have read so much on Art, and have had lessons from so many excellent masters, do not improve at all; my sketches being no more like pictures than when I first began?"

A question of so much importance requires great consideration; but as we have agreed to allow truth to be our guide, we must consider, in the first place, whether you are not mistaken when you speak of studying Nature and Art. You travel over too much fine scenery to study nature carefully, and with companions who either do not sketch, or who sketch as hastily as yourself: this will not lead to improvement. You see too many pictures to examine Art with profit, the faults and not the beauties of which attract your first attention; this, with the help of clever critics, can be done with the greatest facility, and makes you dissatisfied with them as well as yourself. You also skim too many works on Art; have too much apparent knowledge of principles and rules which you cannot apply. All this makes you doubt the genuine power of Art. One guide, in whom you have confidence, with one or too good works at a time, would be far better. It is a common idea that the whole province of Art is to deceive; on the contrary, Art has to represent that which words cannot do so well. What words can fully express or convey a distinct conception of colour, or even of the simplest form?

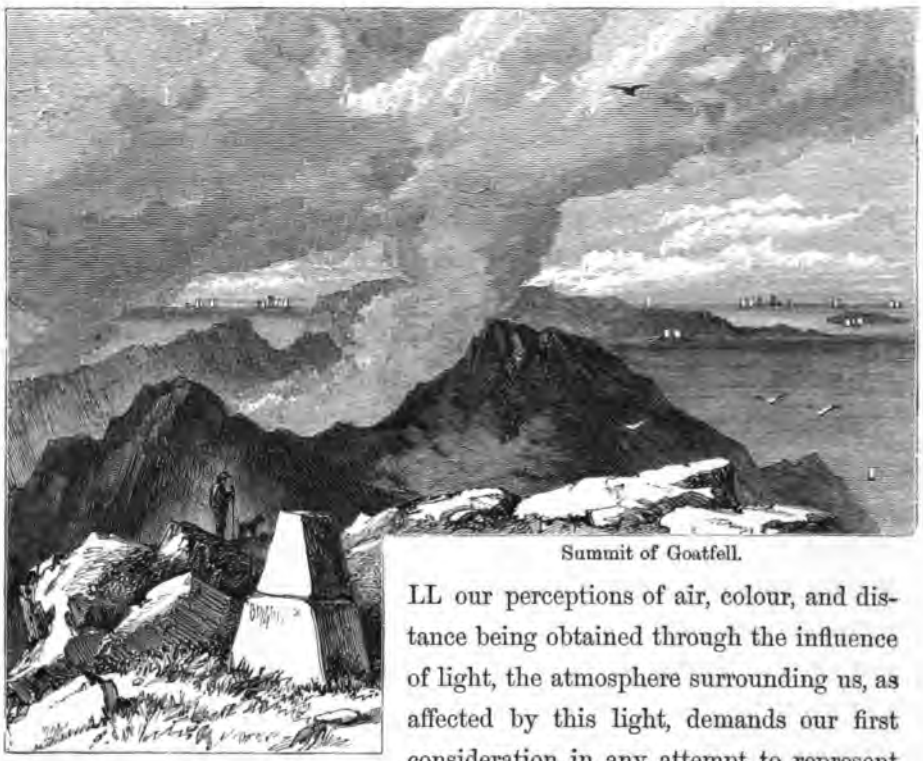
Endeavour, therefore, to gain more simple and noble ideas of our branch of Art, which is to give clear and truthful representations of nature as it appears to those who have the power of seeing it at a glance, at one moment of time, under the most favourable influences. This power, possessed but by few, may be compared, although apparently so different, to that of the eagle-eye of a great general, who, by a glance at the field of battle, takes in not only what is at the moment before him, but what will happen in the course of the eventful day. Our Shakespeare had the high quality of knowing and feeling how each of his characters would act under any circumstances. A great artist is one who, in like manner, knows how the landscape will appear under varied effects: he thinks no trouble too great, no hill too steep or high to climb; difficulties to be surmounted only increase his ardour. You also must discard laborious idleness, and avoid using your hands while your head is idle. Think all the higher thoughts of your subject right out, keeping the leading idea always in sight; this will prevent your attention being directed to minor considerations. For example, if you are careful and anxious about the quality and texture of a piece of rock, or the freedom of the touch of a tree, when you ought to be making the general effect predominant, you will fall into littlenesses. If you are patience itself in stippling up accessories and background when truth of drawing or sentiment is wanting, your apparent industry will be thrown away. What do physicians think of a patient who reads all the medical books he can find, who is always talking about diseases and his own ailments, and yet never thoroughly follows the advice of his doctor? You must change all these cursory habits, must see less, talk less, and work more; you must have the courage to dive below, not skim the surface, or you never will improve, but always continue merely a clever amateur, but no artist. There is not so much intricate art in the greatest artists as you imagine; their best works are simple, forcible expressions of a determined will. As a useful discipline, take a group of still life, composed of a Portugal onion-basket, pans, bottles, &c., on matting; and having arranged a picturesque group, good in form, light and shade, and colour, place it in the sun in your garden, keeping yourself in shade. Work at this steadily two or three hours of a morning for a fortnight, and then see the result; you will then discover the improvement you have made.

Answers to other Questions have been merged in the additional matter given in each Section of the Work.

CHAPTER IV.

ON PRACTICE.

SECTION I.—SKY, ATMOSPHERE, CLOUDS, ETC.



Summit of Goatfell.

ALL our perceptions of air, colour, and distance being obtained through the influence of light, the atmosphere surrounding us, as affected by this light, demands our first consideration in any attempt to represent nature in her true colours. The variations presented to our view are so numerous, and so strikingly affect the appearance of nature, that the landscape-artist would do well to give his earliest and best attention to the general principles governing these changes. Fortunately, this essential portion of his study is ever open to the student; for, granted that he is far removed from other subjects of interest or beauty,—that he is confined within the straitened limits of a town,—yet in the sky and aqueous vapours floating in the atmosphere he will find a constant succession of varying effects, an inexhaustible fund of subjects for his contemplation.

The terms 'space' and 'air' being in art synonymous with 'sky,' we must begin by inquiring what are to the artist the most important qualities of the atmosphere which surrounds the earth. On looking up to the zenith when the air is free from aqueous vapour, we are conscious of a perfectly transparent ether, through which the eye appears to penetrate unbounded space. This space, viewed from the summits of mountains or other situations where there are no mists, appears distinctly of dark blue; yet so immeasurably does this colour differ from any pigment with which we attempt its imitation, that the latter can scarcely be deemed the same colour. This arises from the fact that the former is not a flat tangible surface, but, on the contrary, a quivering transparent medium, whether coloured itself or only imparting colour we cannot here inquire, but the character of which it should be our aim to represent as perfectly distinct from that of any object on the earth.

To accomplish this in any degree, it will be necessary to dismiss from our minds all idea of the sky being a blue vault, requiring merely a pigment of like colour to represent it. Air itself is invisible, and its usual appearance is derived from the vapours diffused through it; a fact which may be proved by looking upwards from some lofty position through a pure atmosphere, when we shall perceive the space above us to be far darker in hue than when seen from the usual level of the earth. In our endeavours to imitate space, we are greatly assisted by the circumstance of the clouds and mists which float over the landscape having a tendency to blend earth and sky in harmonious union; in the same manner that water is united in appearance to the earth or rocks over which it flows, the water forming a medium of different degrees of transparency, through which the variously modified colours, shades, and tints pass in their passage to the eye. Both air and water alter the colour of objects seen through them; and as they are associated in the atmosphere, they are especially capable of showing an infinite variety of the brilliant colours produced by light. Clouds must be considered as inseparably related to what is called the sky in which they float. In it they are formed, and whilst in it dissolve away: consequently, they must not be separated by painting the one as a solid mass of blue, to represent the distant sky, and the other as solid masses of gray and white,

much nearer to the earth than the blue; but the whole must partake largely of the quality of air and space. Such a result may be produced by, at one time allowing light to penetrate into and through the substance of the clouds; at another, by representing them of such opacity as to catch and reflect large quantities of light. Now as vapour viewed from various positions varies in its powers of displaying light and colour, we have in clouds many opportunities of either increasing or diminishing the light of the picture, while at the same time we vary the colour.

Happily for those who use water-colours, this important portion of the labours of the artist is, by the medium employed, rendered much less difficult of execution to them than to the painter in oil; as they can with comparative ease gain the effect of air and distance. Indeed, we have in our modern water-colour paintings many works far superior in these qualities to any pictures bequeathed to us by the most celebrated of the old masters.

Before commencing the artistic study of clouds, the student would do well to examine the causes regulating their appearance; for the latter are by no means fitful or irregular, but, on the contrary, nature here as elsewhere is true to herself and obedient to immutable laws. To avoid making any serious mistake, or introducing clouds into pictures at times and in situations when and where they could not possibly appear, the different varieties should be classified; for which purpose, the mind, whilst viewing them in nature, should be directed to their connection with the other circumstances of the time or season, so that pictorial incongruities may be avoided. In our observations of clouds and sky, we may often take a hint from the experience of country-people, who, though ignorant of the practice of art, are often accurate observers, and, from their out-door life, have abundant opportunities of studying the changing effects of nature.

Although there is more expanse of sky visible from a plain than a valley, clouds are seen to greater advantage in a mountainous country; the difference of elevation affects their forms, and the consequent changes of light produce a variety which is in union with the scene depicted. Crags and trees give many occasions of marking both the features of the country and the nature of the aerial effects which such scenes produce.

Clouds, as usually classed, are in accordance with the heights at which

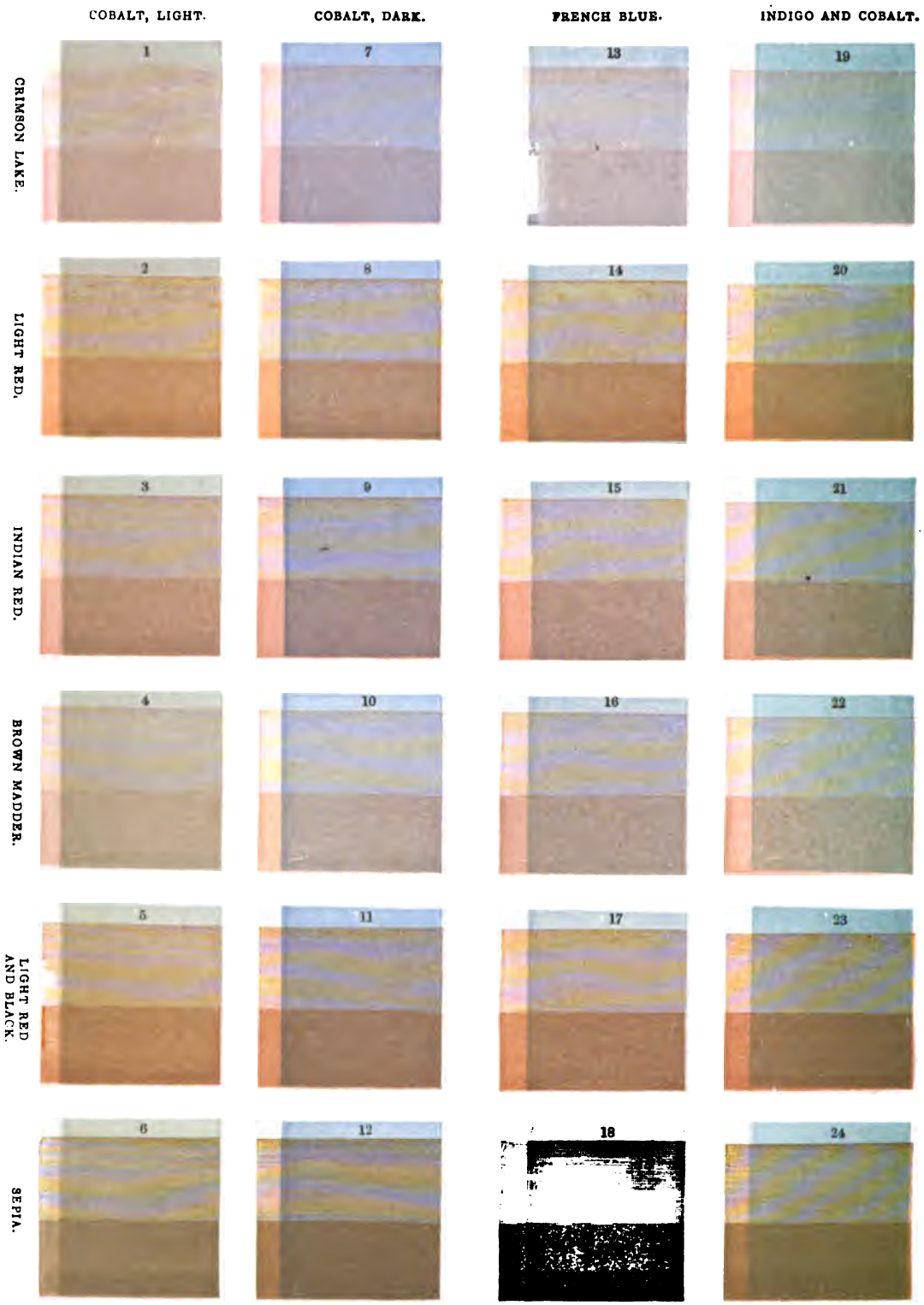
they appear. Thus at the greatest elevation is the cirrus, a light filmy cloud appearing in serene weather. The cumulus, or heaped cloud, comes next in order; it has a rounded, well-defined shape above, and is moderately flat below: this description of cloud is generally visible in the afternoon, and presents many very beautiful forms and colours towards sunset, when it disappears. When occurring alone, this cloud generally accompanies fair weather, and, from its density, casts very refreshing shadows on the earth; but when united with the stratus more frequently indicates rain. The stratus, or third kind of cloud, appears as a low flat mist, often formed by the sinking of masses of vapour in the evening.

To these may be added the cirro-cumulus, forming a very beautiful appearance, sometimes called mackerel sky; and also the small ragged clouds occasionally seen sailing through the air, which are called scud. They indicate rain; and may be either light or dark, according to the amount of light they receive from the sun. Whenever clouds are depicted, their character should be in strict conformity, not only to the season of the year, but also to the hour of the day; nothing can give the artist this knowledge but a close observance of nature, and a constant and careful copying of the atmospheric effects presented to his view.

In Constable's journal of his practice, there is continual recurrence to what he called his "going out skying," showing how much importance he attached to that portion of an artist's studies. By such earnest study, atmospheric effects may be represented not only with the brush and colours, but also with chalk, tinted paper, stump and white; in fact, for rapid sketching, and when form is of the most importance, these latter materials frequently answer the purpose better than washes of colour, which take so long to dry, that the character of the effect is changed, and its evanescent beauties lost during the progress of the study.

As the mode of working the flat washes constituting the commencement of skies, clouds, &c., has been described in the previous section, it will only be necessary to add, that the aerial tones will be more easily produced when the student, having returned to his study, has time to allow the washes of colour to dry on, and then to be treated with water, as explained

TABLE OF AERIAL GRAYS.



LEIGHTON, BROTHERS.

PLATE 10.

at pp. 116 and 135. This should not, however, prevent his attempting to imitate the tones of nature at the time his sketch is taken; he can supply deficiencies in the execution by the addition of written notes on the back of his sketch.

The student may derive some assistance by turning to the table of aerial grays (Plate 10), and to the views of Brientz (Plate 9) and Start Point (Plate 8), where such tones have been attempted; although the mechanical result there shown can but feebly indicate the effect of the pure wash composed of a mixture of two colours applied by hand. In Plate 10, four bands of blues, of different qualities and degrees of intensity, are passed through, or mixed with, various warm tones, principally reds; thus producing grays or purples of different degrees of purity. This will afford the student an opportunity of studying the qualities of the pigments he employs, and comparing the tones made by different pigments together; by this he will perceive the tendency that any one of them has, for the union of two often makes these qualities more conspicuous.

TABLE OF AERIAL GRAYS, PLATE X.

No.	
1.	Cobalt Blue and Crimson.
2.	Cobalt Blue and Light Red.
3.	Cobalt Blue and Indian Red.
4.	Cobalt Blue and Brown Madder.
5.	Cobalt Blue and Light Red and Black.
6.	Cobalt Blue and Sepia.
7.	Cobalt Blue, full tint, and Crimson Lake.
8.	Cobalt Blue, full tint, and Light Red.
9.	Cobalt Blue, full tint, and Indian Red.
10.	Cobalt Blue, full tint, and Brown Madder.
11.	Cobalt Blue, full tint, and Light Red and Black.
12.	Cobalt Blue, full tint, and Sepia.
13.	French Blue and Crimson Lake.
14.	French Blue and Light Red.
15.	French Blue and Indian Red.
16.	French Blue and Brown Madder.
17.	French Blue and Light Red and Black.
18.	French Blue and Sepia.
19.	Indigo and Cobalt and Crimson Lake.
20.	Indigo and Cobalt and Light Red.
21.	Indigo and Cobalt and Indian Red.
22.	Indigo and Cobalt and Brown Madder.
23.	Indigo and Cobalt and Light Red and Black.
24.	Indigo and Cobalt and Sepia.

Wherever these bands of colour cross or mingle, others of the same nature may be substituted; they may also be varied in the proportions used, as some of these are: thus, for crimson lake, we may put rose madder or madder carmine if we require greater purity, and force is not desired; or purple lake, if we desire great force; for light red, we may substitute Venetian red; and as the latter is a purer red, not having so much yellow in it, we shall

find the mixture is not so green; for brown madder, purple madder, and so on. The student in this way may form such arrangements as will supply an endless variety of tints, and the practice will also assist him in acquiring a knowledge of the colours he employs.

The following additional notes, with reference to this table, will show in what order, and for what purpose, the different tints may be used:

AERIAL TINTS FOR SKIES AND CLOUDS.

For first washes, to prepare the paper,

NEUTRAL ORANGE, composed of varied quantities of YELLOW OCHRE and BROWN MADDER, for skies, clouds, and distances in general.

CADMIUM and ROSE MADDER or MADDER CARMINE, for those skies where great purity is required.

LIGHT RED, VENETIAN RED, or INDIAN RED are also employed in delicate washes to give warmth.

When the first tint, of whatever composed, is dry, and has been washed off, the bluish-grays are to follow, according to the tone or effect desired, the student bearing in mind that each succeeding wash leaves more of the paper untouched; so that at last, by repeated additions of tints partaking more and more of the cobalt or other pure blues, the lights appear by comparison of a rich mellow tint. In water-colour painting, cobalt is the most useful blue for skies and distances; it is shown in Plate 10 of two degrees of strength, and also mixed with a little indigo. Should the washes of it appear a little green, it will be necessary to pass them over a slight wash of rose madder or crimson lake, or pass a wash of French blue over them. For the tones of daylight skies, cobalt therefore takes the precedence in our table.

FRENCH BLUE produces fine deep tones with the same colours, but it does not work so well. It is better, in the course of the working of the sky, to pass a slight wash of it over the cobalt and other colours.

INDIGO and PRUSSIAN BLUE require to be used with the greatest caution. In skies or distances the former is generally too heavy, and inclined to green; but for twilights it is very useful, as it produces the effect of subdued depth and a gray tone, taking away the cold rawness of cobalt.

Tints of crimson lake will be found mixed with cobalt and other blues in Plate 10, Nos. 1, 7, 13, 19.

LIGHT RED, mixed with the blues, produces tones much less pure or aerial; having yellow in its composition, it causes them to incline to green. (Vide Plate 10, Nos. 2, 8, 14, 20.)

LIGHT RED, mixed with black and cobalt blue, makes a fine silvery gray tone, scarcely possible to be represented, but attempted in Plate 10, Nos. 5, 11, 17, 23.

VENETIAN RED may sometimes be substituted for light red. Both of these make good tones for the shadowed parts of clouds.

INDIAN RED in light washes will be found very useful in all skies of deep subdued tone, or in clouds of a stormy character; although much like brown madder, it is in these parts of a drawing to be preferred; the only difficulty is to prevent its appearing heavy, as it absorbs much light. (Vide Plate 10, Nos. 3, 9, 15, 21.)

BROWN MADDER is in all its mixtures exceedingly useful for the distance and middle distance; joined with any of the blues it forms fine grays, varying from aerial tones to deep rich maroons. (Vide Plate 10, Nos. 4, 10, 16, 22.)

SEPIA, rendered cool with cobalt or French blue, is of much use in the quiet russet tones of the middle distance. (Vide Plate 10, Nos. 6, 12, 18, 24.)

The changes which can be produced by varying the quantities of each of these pigments are innumerable, and to repeat them would only confuse the pupil. Enough has been done by the combination of Plate 10 and notes to show him their nature and uses. For the tones of sunset, or rich golden skies, the first washes are composed of variations of the following pigments:

YELLOW OCHRE and CADMIUM YELLOW.

YELLOW OCHRE, INDIAN YELLOW, and ROSE MADDER.

GAMBOGE, or LEMON YELLOW, and CADMIUM YELLOW; GAMBOGE and ROSE MADDER.

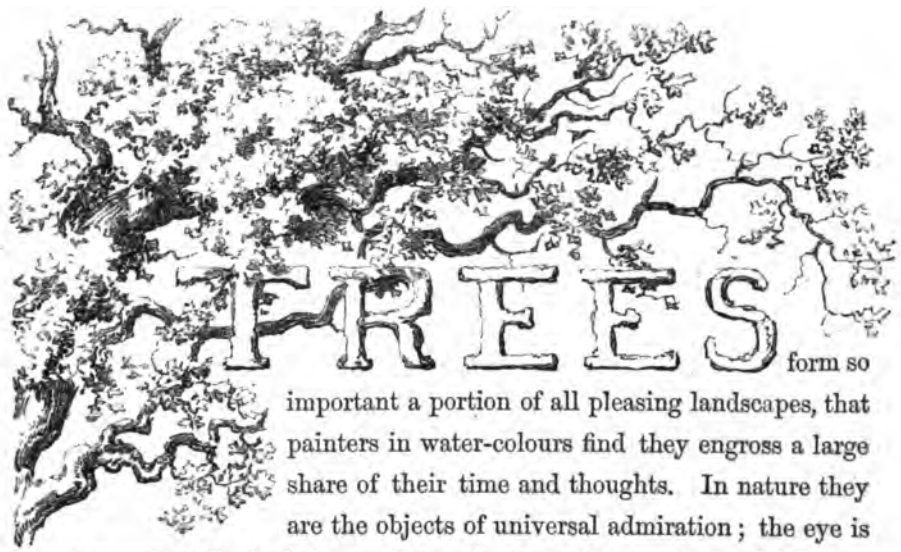
In fact, all the first five of the pigments shown in Plate 4 may be used; the first three more as auxiliaries in light washes; the two others in repeated washes.

In scarlet and crimson sunsets or sunrise clouds, more of red pigments must be used. Amongst these ranks first in importance ROSE MADDER, called also when purified and more intense MADDER CARMINE (No. 12, Plate 4); then CRIMSON LAKE (No. 13); and sometimes a little INDIAN RED (No. 15), or PURPLE MADDER (No. 16). In purple, and the deeper-toned clouds, we may use the madders more freely, and substitute French blue for cobalt.

In twilights, or dark cloudy effects, where great power is desired, FRENCH BLUE and INDIGO are to be preferred, the tendency to green in the latter being corrected by some of the stronger reds, as CRIMSON LAKE, INDIAN RED, PURPLE and BROWN MADDER; when more neutral tones are required, LAMP BLACK, IVORY BLACK, or ULTRAMARINE ASH are used in addition, these pigments affording silvery grays of a soft or subdued character.

In forming all these aerial grays we must endeavour to select the most transparent pigments; and by using them, when painting skies, in thin but full washes, and also by the repeated washing mentioned in Chapter III., Section III., on Mode of Working, we attain the greatest clearness and force of colour, without however approaching gaudiness.

SECTION II.—TREES.



form so important a portion of all pleasing landscapes, that painters in water-colours find they engross a large share of their time and thoughts. In nature they are the objects of universal admiration; the eye is never fatigued while dwelling on their refreshing tints and graceful forms; without them our landscape scenery would be barren and incomplete; whereas a fine tree will itself present a beautiful picture, showing vegetation in its most vigorous development, abounding in variety of form, of light and shade, and of colour; adding grace and beauty to the landscape, refreshing the eye, and forming an intermediate link between earth and air. Ever full of life and motion, it offers a succession of beautiful changes, marking thereby the various seasons,—the fresh delicate hue of Spring, the deep vigorous green of Summer, the rich glowing tints of the decaying foliage in Autumn; and, even in dreary Winter, the leafless yet beautiful skeleton adds a charm to the scene, and shows the character of each kind almost as plainly as when in full foliage.

Should we, because this important branch of our pursuit requires much study and care, avoid it, and select only such scenes as possess these beauties in a slighter degree? Should we not rather devote our most earnest endeavours to understand and master its difficulties, fully convinced that we shall be amply repaid for any additional labour we may take?

Trees, like other portions of nature, constantly varying and multitudinous in their parts, require to be studied according to some methodical arrangement; and it is the author's wish to give here a slight outline of the system he recommends for this purpose, referring the student to his former works on foliage for the more minute details of the subject. Trees may be viewed either individually or in connection with other effects; and, having become acquainted with their character as they generally appear when in a perfect state, the artist soon abandons the mere botanical study, and delights in taking them as component parts of the whole scenery of a country. An intimacy with their botanical character and habit will be found of great assistance; for by it he becomes aware of their usual appearance, their height and breadth, and their comparative size and form,—qualities best seen against the sky. Perhaps the next most important characteristic to mark is the colour of their foliage; when, by close observation, the student has become fully acquainted with this, he will be able, even when at a considerable distance, to distinguish the kind of tree he wishes to represent. Character will, of course, be most strongly developed in the full-grown tree. After the general colour, the light and shade should be remarked. In trees the power of reflecting masses of light varies considerably; for the foliage of some—such as the elm, beech, &c.—is so dense, and the disposition of the branches so arranged, that the form of the light masses can more readily be distinguished, and the character more easily delineated than in others, like the birch, which have thin or scattered leaves.

The position of the trunk and limbs must be duly observed: the stems of most trees growing on level ground will be upright, and the head well balanced; the branches may not be equally placed, but the general quantities will be the same; on unlevel ground, on the banks of rivers, sides of cliffs, &c., or when trees grow in groups, or meet with obstruction in any direction, their positions vary, many appearing much inclined to the horizon. In this respect the object of the artist differs materially from that of the botanist; the latter preferring for his specimen a perfect tree, undisturbed in its growth by any irregularity or accidental circumstance; even wishing it to be sheltered from any strong prevalent wind that might give it an inclination contrary to his ideas of perfection. The artist, on the

other hand, is delighted to see the greatest diversity in growth and situation, such as the effects of irregular ground or rocks on the form, the result of wind or storms blowing down some trees and leaving the trunks of others more exposed: the grouping of several trees together also causes great variety in the disposition and growth of their branches. Although the natural form or outline of a tree can only be ascertained when it stands alone, yet the character of each kind will be strongly developed when they are accompanied by other objects which afford opportunities for displaying their peculiarities. Such opportunities frequently occur; as, for instance, the association of the ash with ruins.

Trees are much affected by the soil, situation, and climate in which they grow: some, like the pine and fir, increase in height; others, like the oak or chestnut, spread in width.

Branches of trees vary much in their size and the angles they make with the parent stem; in some, as the oak, chestnut, &c., the trunk appears to be almost lost among the branches; those of the fir tribe have very small limbs in proportion to the size of their trunks. In some, again, each branch divides into many branchlets—as the oak, beech, birch, &c.; while others, such as the poplar, possess but a few small twigs or sprays. The mode in which the leaves combine should also be carefully studied. The usual form of groups of foliage is either roundish or oval; but some, like the beech and cedar, have their sprays or twigs so arranged that they appear like layers or strata.

In drawing the trunks and principal branches of trees, a difficulty occurs which nothing but a close observance of nature will obviate; for, with regard to the main stem, it will not be sufficient to mark the outline only where it proceeds from the ground, but it will also be essential to observe how the trunk rises from the large, well-defined roots, protruding, in many species, quite out of the earth; these, owing to the variety of forms presented by grass or broken ground about them, afford many opportunities of giving true perspective. Sometimes, indeed, in thick woods, this important point may be rendered obscure by the continual fall of leaves; but trees standing in open situations always rise out of the ground with a conspicuous base, formed by the junction of the trunk with the roots. No circumstances

add more to the effect of a tree, as a noble and stately object in a landscape, than the appearance of its massive trunk rising from a secure and widely-spreading base; and when old trees standing singly in a park are introduced, it is especially necessary to represent this appearance correctly. The stem itself should appear in the centre of the foliage, and of a round form, becoming more taper at the separation of each branch; this tapering recommencing at the divisions rather than being carried on by a regular decrease from the root upwards. The branches should be spread throughout the foliage in graceful ramifications,—not by a succession of curves, but by a just combination of curves and angles of different degrees, presenting the most varied lines of beauty. When hidden by the foliage they should be so represented as to be carried on in imagination, until they re-appear in their proper place and of their true size, being at last lost among the leaves at the extremities.

Although it is necessary to examine thus carefully the prevailing mode of growth and character of trees, so that the student may be able to represent them faithfully, he must bear in mind that he is not expected to exhibit in his paintings more detail than would be perceived by any person unacquainted with their peculiarities when viewing them from a distance.

A previous study of the characteristic touch of each kind of foliage, in pencil or chalk, having given the student much command over his brush; and practice with the brush and sepia having made him master of many of the difficulties of handling,—he will, as a consequence, find colour and the brush far more effective and rapid than either chalk or pencil, and with care he will approach much nearer to nature: still there will be some difficulty in arriving at all the varieties of tint, air, distance, or looseness of appearance; so that it will be useful to recur again and again to chalk, in order to keep up that variety and delicacy in detail and freshness of nature which he should aim at preserving.

One important point is to be observed on commencing the use of colour: the local colour of all trees is dark in comparison with many other objects, and has to be represented without destroying the breadth of light and shade. Some trees, with dense foliage, take large massive lights, and their shadows consequently appear proportionately dark; others, with scattered and thin

foliage, have scarcely any difference in the light or shadowed side; but in these instances the stems, being more seen, give a compensating air of grace and motion.

Having by these observations arrived at some idea of the growth and varieties of character appertaining to trees, we must now, in order to gain the power of delineating them with ease, examine the details of the tufting or subordinate masses of foliage,—a knowledge of which, added to that of the forms of their leaves and general growth, will enable us to depict the whole with firmness and energy; for, as foliage cannot be copied with minute fidelity, but, on the contrary, the touch representing it should be rather suggestive, and the forms generalised, it is essential that we should be intimately acquainted with the anatomy of the different species. An outline of the trunk and branches being carefully drawn, and the boundary line of the foliage marked, the next proceeding is to put in the masses of colour with bold but not careless handling. The touch should possess such a character as may inform the eye at a glance to what species the tree belongs; for by at once securing individuality when the masses are put in, much subsequent trouble and uncertainty will be avoided. In this particular, water-colour differs materially from oil-painting, in which the masses of colour are first rubbed in, and then the extremities finished by degrees. The chief thing is to give to the touches that ease and freedom which are the characteristics of nature; and this cannot be done unless the hand, by previous practice in drawing all kinds of lines, has acquired that free and graceful motion which alone can enable it to express every variety of form with firmness, decision, ease, and grace. The facility of effecting all this may be followed up by studies imparting a like power over the deeper subtleties of colour, the attractive force of which is so great, that it may be said to amount to fascination. The student should bear in mind that, in nearly every case, the whole mass of foliage is lower in tone than the sky; and when laying in the first tints, representing the local colour with the requisite degrees of firmness, it will rarely be found necessary to leave any portion of the foliage of the lighter tone of the paper or sky already put on, the light spaces between the leaves and boughs being the only parts so left. The quality of the first tone is usually neither so warm as the lightest

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LEIGHTON, BROTHERS.

PLATE 12.

THE ELM. FIRST AND SECOND TINTS.

of the foliage, it sometimes happens that the whole mass relieves cool, as in this instance, from a body of warm colour, presented either by a sunset or the local colour of the objects behind. Examples 4, 5, and 6, show the reflection of the cool tint of the sky behind the spectator; and should the foliage be glossy—many leaves being so—the upper portions and extreme edges, partaking of the character of the sky, will be still cooler; while the rich bright colour seen through the leaves and branches, attracting the eye, will cause it to penetrate to the warmer tone beyond. In Example 7, warm autumnal colours are massed together. In this case, the light parts being illuminated by the sun, their tints are extremely rich, and the eye penetrates, as it were, the whole mass, which possesses great depth of colour without blackness. To obtain this effect, great care in preserving the purity of the tones is required, and the whole must be worked by a process of dappling in pure colours harmonising with each other.

Trees present many varieties of tints, some partaking so largely of the gray or purple character that they can scarcely be called green; such are those of the fir tribe—dusky and deep in their general aspect, and, even when lighted up by the sun, neutral in their appearance. (Vide Example 8.) Again, there are others rendered neutral either by distance or the varying effects of air and light. Thus, in Example 9, the green tones, notwithstanding the light in which they are viewed, are changed almost to a warm broken gray. To form this, pigments semi-opaque and undecided in their character are used.

Having described the varieties of foliage shown in Plate 11, we will now pass on to an elementary example of the elm (Plate 12), showing the first tints.

The first general tint and shadow having been put in with a brush always sufficiently full to give transparency and richness, the masses will have rather a hard appearance, without much apparent freedom; and water-colour drawings in this state have a commonplace air: there is great breadth, but none of that play of light and shade, none of that intricacy of form and endless variety of colour, abounding in nature; so that it requires considerable reliance on recognised principles to proceed with the hope of arriving at a good result. These broad masses are now to be subdued by

half-darks, slightly varied in colour, but still cooler than the broad mass of light. The completion of the foliage must not be attempted with this part of the process, the greatest darks and highest lights being yet to come. In the disposition of these, the pupil must constantly bear in mind the direction of the light, as the broadest mass of light must be preserved on that part of the foliage nearest to the side whence it proceeds. The whole mass of foliage being now subdivided, it will be perceived that some of the groups of leaves may in a degree be made to retire by casting half-shadows from one branch to another, taking care that the transparent shadows thus cast carry the lines from the upper part of the tree obliquely downwards. When these are put in with varying degrees of force and colour, the intricacy of the foliage is much increased. The branches are now added with that decision which nothing but previous drawing of their outline, and subsequent laying in masses of foliage to correspond, could give. Upon the drawing and colour of these will greatly depend the life and truthfulness of the representation. If they are too visible, or brought too forward by strong positive colour or shadows, the whole of the foliage will appear on the farther side of the tree; if they are not sufficiently distinct, the tree will look heavy and flat; the branches should project from the stems in a natural, characteristic manner, pass behind the dense masses of foliage, and freely intersperse themselves among the boughs and leaves: in the position in which trees are usually viewed, they will be seen beneath the broadest masses of light, not upon them; and their colour will be influenced in a great measure by the foliage and light. For the sake of simplicity, this plate of the elm is left in this stage, and the student is also referred to the previous elementary examples, Plate 11. For the concluding description of finished foliage, he is referred to Plate 14. The branches having been broadly but firmly delineated, the highest lights on the foliage are to be given; and it will be found that *taking out* their forms gives the greatest relief and opacity. The mode of effecting this with decision is to touch repeatedly a few of the leaves with water; and when it is absorbed with blotting-paper, to rub them smartly out, rubbing from the light sky into the dark tree, and thus not taking any of the green into the sky: this may be done either with a cloth or india-rubber. Other touches are afterwards

added, so as here to form masses, and there scattered foliage. Some of these are again glazed down with the richer and more transparent pigments, others with cooler tones; the whole group of leaves or boughs being brought out by the addition of deep and warm tones, dappled in so as to preserve transparency in the shadows, and avoid coldness or blackness. Although the whole tree is now assuming a complete form, yet there will be a want of perspective in the extreme edges of the foliage, or the underneath parts of the boughs, resulting either from the fullness with which the first tint was put on, or the difficulty of afterwards changing it sufficiently to give aerial perspective to different parts of the same bough. These edges can, however, be reduced by delicately touching them with a brush and water; at the same time taking care to rub the superfluous colour towards the foliage, and not towards the sky or lighter parts of the drawing. The under part of the retiring boughs, after being thus rendered more distant, may be glazed down with French blue, and some kind of red; thus producing cooler and grayer tones. The final touches (giving grace, lightness, and mobility, with variety of form and colour, to the foliage and branches) are now to be added. It is in this portion of his labours that the accomplished artist delights. At this moment he feels that the hours he has spent with nature—his innumerable and varied studies of each kind of foliage and tree—his careful notes and observations on the effect produced on the colour by the time of day and the season of the year, the degree of transparency or gloss on the leaf, and the variety of the texture and tint of the bark,—all combined will enable him to complete the drawing begun with so much system and breadth, by adding the delicate refinements of art while aiming at an accurate representation of nature. It is precisely at this moment that the amateur, without system and education in art, feels his deficiency. He adds,—but only to detract from the effect of what he has already done. Beginning without any idea of arrangement or order, he has made a most careful outline of the minutest parts, putting in innumerable touches in order to secure the character and shapes of the foliage: by a constant repetition of these anxious labours, he destroys all breadth of effect, all freedom of handling, and all clearness of colour; in his desire to preserve form, he has lost it; in aiming at clearness of colour-

ing, he has either become feeble, or by a repetition of tints, confused the forms, and produced muddiness; thus proving the importance, in this pursuit, of some well-defined system upon which to depend for success. On the other hand, the artist now ceases to concern himself with the first difficulties of mixture of tints, the handling of the extremities, or the freedom of the branches. Placing his picture on the easel, he retires to such a distance as to enable him to see it as he would nature herself; forgetting his previous labours, he regards it with a fresh and unprejudiced eye: he examines the tree with regard to other portions of the subject; he ascertains if it agrees with them in tone, sentiment, and expression; whether it engrosses too much or engages too little of the attention; whether it is well placed on the ground, has too much weight of foliage, separates the lights of the picture, or has the proper gradation of colour towards the base. In this way he judges if it be possible, by a few touches with his penknife, to let sparkling lights peer through the detached leaves; whether by these means he can show the outline of the trunk or branches more distinctly; also whether, with some judiciously placed and brilliant leaves, either taken out with the same instrument, or put on with opaque white and Naples or lemon yellow, he can bring the nearest boughs more forward. He notes that each branch is in its proper place,—here adding force, there taking away dark; his object being to leave the tree as free and graceful as in nature,—a beautiful retreat for birds flying for refuge among its branches.

In speaking of the exceeding intricacy of foliage, and the impossibility of representing it leaf by leaf without system, Ruskin, in his *Modern Painters*, has a passage so appropriate that it is here added: "But if nature is so various when you have a bough on the table before you, what must she be when she retires from you, and gives you her whole mass and multitude? The leaves then at the extremities become as fine as dust,—a mere confusion of points and lines between you and the sky,—a confusion which you might as well hope to draw sea-sand particle by particle as to imitate leaf for leaf. This, as it comes down into the body of the tree, gets closer, but never opaque. It is always transparent, with crumbling lights in it letting you through to the sky. Then out of this come, heavier and heavier, the masses of illumined foliage, all dazzling and inextricable, save

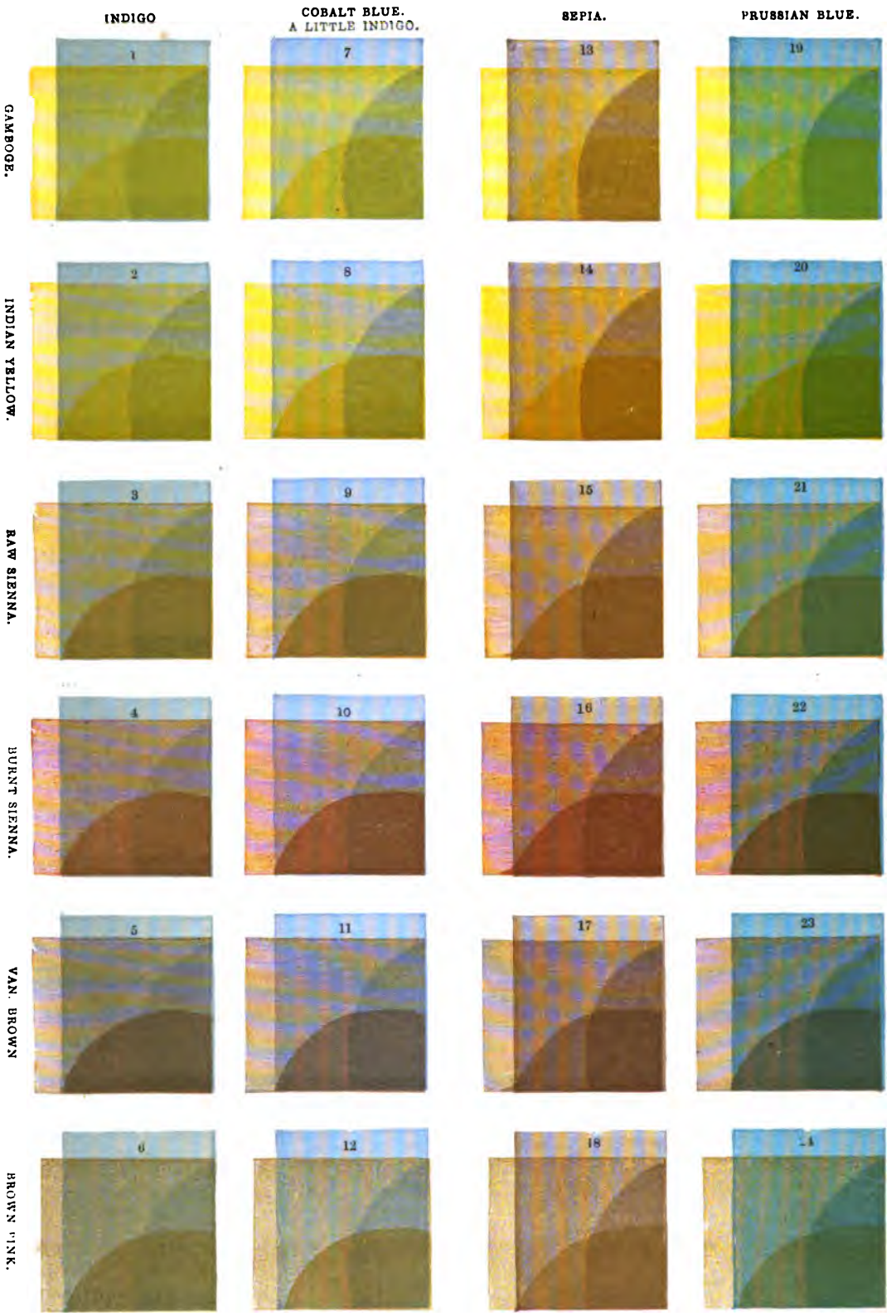
here and there a single leaf on the extremities. Then under these you get deep passages of broken, irregular gloom, passing into transparent, green-lighted, misty hollows; the twisted stems glancing through them in their pale and entangled infinity, and the shafted sunbeams, rained from above, running along the lustrous leaves for an instant, then lost, then caught again on some emerald bank or knotted root, to be sent up again with a faint reflex on the white under-sides of dim groups of drooping foliage; the shadows of the upper boughs running in gray network down the glossy stems, and resting in quiet checkers upon the glittering earth; but all penetrable and transparent, and, in proportion, inextricable and incomprehensible, except where, across the labyrinth and the mystery of the dazzling light and dreamlike shadow, falls, close to us, some solitary spray, some wreath of two or three motionless large leaves, the type and embodying of all that in the rest we feel and imagine, but can never see."

Shadows cast by trees vary much in their colour and density; the latter being in some, the beech for instance, so intense that it does not even permit the grass to grow; thus causing a change in the local colour of the part beneath: in others, again, it is much lighter and more diffused. In all cases, when the shadow of foliage falls on the trunks, it will give rise to great variety of line, and afford many opportunities for showing the true perspective of the form.

In respect to the checkered light and shade proceeding from single leaves or separated masses of foliage, the student can scarcely escape, during his early observations of shadows cast by the sun, meeting with difficulty in accounting for the innumerable varieties presented to his view. A leaf close to a wall will cast a shadow in form like itself; another leaf at the distance of a yard or two will give a shadow of indefinite outline, having a round instead of an angular edge; a leaf at a greater distance will produce a mere dimness hardly distinguishable as to shape. In like manner, an angular opening among the leaves, if near the wall, will produce an illuminated angular space; but if distant, it will present a rounded form. All this depends upon the apparent size of the sun—the source of these lights and shadows. If a screen, having in it a round hole about half an inch in diameter, be held so as to cast its shadow on the floor, there will appear on

the latter a circle of light corresponding with the hole. If the screen be close to the floor, this light circle will be of the same size as the hole; but on raising it from the floor, the illuminated space will become larger and larger, and its edge more and more diffused and indistinct. If triangular instead of round, then, when the screen is near the floor, it will give a triangular space of light; but as the screen is moved away, this space increases, and becoming dim at the edges, the angles disappear, and at a certain distance the aperture gives a round image of the sun four or five times larger than that seen in the first position. On examination it will readily be perceived that these effects arise from the apparent size of the luminary compared with the aperture, and that the light from one side of the sun passing through it obliquely, crosses to the other side under the screen; and that this action, being repeated all round, produces the enlarged image of the sun on the floor beneath. When the aperture is a mere pinhole, the effect becomes that of the camera obscura; when larger, the round illuminated space is really an imperfect image of the sun. Thus, when the apertures between the leaves of a tree are small and distant from the place where the shadows fall, the light spaces are rounded, being rough images of the sun overlapping each other. This is so true, that in a partial eclipse, the peculiar effect produced often causes great surprise; for the light spaces on the ground or walls have the same form as that presented at the time by the sun itself; though, owing to the crossing of the rays at the aperture, the position of these forms is that of the sun inverted. It should be remarked, that the brilliancy and power of the sunlight in these rounded spaces are much diminished; so that they must be represented by a grayer tone, making a considerable contrast in this respect to those larger openings among the leaves where the sun shines in full force. A careful artist will observe another interesting effect produced by these lights and shadows. If a leaf or other object intervene, in the course of the rays coming through an aperture in the upper part of a tree, its shadow will be thrown on the ground or wall with remarkable distinctness; of this he may convince himself by intercepting, with the hand or a small spray, the passage of the rays. The philosopher easily traces the cause of this effect to the laws governing the passage of rays of light, which, as they must proceed in right lines,

TABLE OF GREENS AND RUSSETS.



LEIGHTON, BROTHERS.

cannot cross again in passing from the aperture to the ground. The artist who paints with great accuracy may occasionally require such an effect, and therefore it is well to be aware of its nature.

By turning to Plate 13 (a table of greens and russets), some idea may be formed of the great variety of tones that may be produced without including those mixtures under the indefinite titles of Hooker's, Varley's green, &c. It may be well to observe, that the tints in this diagram are merely approximations to the mixtures made with the pigments named in the margin; they are neither so powerful, so transparent, nor so well defined as those which the pupil can make with water; but in the absence of the master, they will in some degree serve to indicate the pigments to be used.

Selecting indigo as the most useful blue in water-colours for forming greens, and cobalt blue with a little indigo, the two extremes are indicated; Prussian blue is also represented as possessing great clearness and transparency; we may add French blue and ultramarine,—sometimes used, but difficult to represent in these tables. Taking, then, *indigo*, and mixing it, as in Example No. 1, Plate 13, with *gamboge*, a most agreeable and natural tone is the result; with *Indian yellow*, as in No. 2, a more powerful and vivid tone is produced, slightly inclined to opacity, owing to the turbid tendency of the Indian yellow. These are both suitable, with more or less of blue, for summer tints; but should it be desirable to give more of an autumnal tone, the addition of burnt sienna, No. 4, is easily made. The pupil will, with very few experiments, perceive that the addition of any of the pigments inclining to red tends to degrade or render the green produced in the first instance less vivid; but he should also bear in mind that the fewer pigments he uses to form his tints, the clearer and more transparent they will be; and that rather than gain the required tint by repeated additions, he should wash all out of his brush and begin again with others better suited for his purpose. Suppose, however, he wishes to make the tints shown in 1, 2, and 3 rather more neutral, without taking away the general warmth, he can add a little of the lakes or madders: one of these tints is shown in No. 5. *Indigo*, with *raw sienna*, No. 3, is a more subdued and indefinite green, suitable, in light washes, for the first tints of water;

with Prussian blue, French blue, and cobalt, these tones will vary in purity and transparency; and the addition of a little crimson lake or madder produces those indefinite gray greens so often seen in water.

The mixture of *indigo* and *brown pink* has already been named as a full-toned and transparent green. All these tints will incline to cool or warm according to the proportion of blue or yellow used; but should it be desirable to produce rich autumnal tones, or to glaze over those already made, suitable tints will be obtained by mixing transparent pigments, such as *gamboge*, with *brown madder*, or *Indian yellow* with *rose* or *purple madder*. Unfortunately, in water-colours, it is not easy to retain clearness and transparency when glazing one pigment over another; it is apt to produce blackness in the shadows of foliage,—a fault by all means to be avoided.

When greens are made with French blue or cobalt, they will be purer and more aerial than those formed with indigo, and be found very useful as variations of colour for the more distant portions of foliage. Some of these mixtures are shown in Nos. 7, 8, 9, 10, 11, and 12.

To produce greater variety in the green of trees and other objects, as well as to obviate an appearance of coldness and thinness occasioned by the continual introduction of blues, the richer yellow and faded tones of grass or herbage in the foreground are frequently made by mixing *sepia* and *gamboge*, No. 13; *sepia* and *Indian yellow*, No. 14; *sepia* and *raw sienna*, No. 15. With Prussian blue the greens are cooler and more decided than with indigo, and are shown in Nos. 19, 20, 21, 22, 23, and 24.

Although the stems and branches of trees, from being for the most part in shadow, do not present such marked variety of colour as the foliage, yet they have some peculiarities requiring mention; generally speaking, they are deeper in tone than the foliage, with the exception of the birch, beech, aspen, and ash; even the last three would often appear of a dark gray were it not for the contrast afforded by the surrounding foliage. The principal thing is to avoid blackness or too deep and decided a colour, such as pure Vandyke brown, umber, &c. Vandyke brown and umber, however, mixed with a little indigo or French blue, are very useful. Brown madder, again, by itself may be too rich in tone, even for the lights; but with a little yellow ochre, or ivory black, it is very true to nature, and with indigo, or French

blue, excellent for the cooler shadows. The same may be said of burnt sienna; Indian yellow added gives the deep mossy green tint for branches and stems in shadow. Almost all the grays used in the middle distance are also employed, varied by light red, rose madder, purple madder, or yellow ochre. Sepia, varied with the same pigments for the light, or with blues and a little lake for cooler-coloured branches, is equally useful; and, to conclude with the same advice given before in the description of foliage, avoid blackness or a dirty appearance, and endeavour to gain power and depth by passing one pure tint or colour over another rather than by putting the full strength on at once.

In Plate 14, the lower portions of a group of beech-trees have been given, in order to show the kind of subject the pupil will find it best to commence with; as by avoiding many of the difficulties occurring in the delineation of more numerous and intricate masses of foliage, and seizing the opportunity of striking contrast, for which the trunk of the beech-tree is remarkable, he will soon find that he can make pleasing pictures. In such subjects it frequently happens that the difference of colour among the stems will afford sufficient contrast; but if this is aided by a fortunate occurrence of light and shadow, the student will be relieved from one of the difficulties in arranging the chiaroscuro of his subject. In this example he may observe that care has been taken to preserve the general breadth of light on the trunks of the trees, by keeping the cast shadows transparent; fortunately, also, the dark-coloured moss, which might have destroyed that breadth, is on the shadowed side.

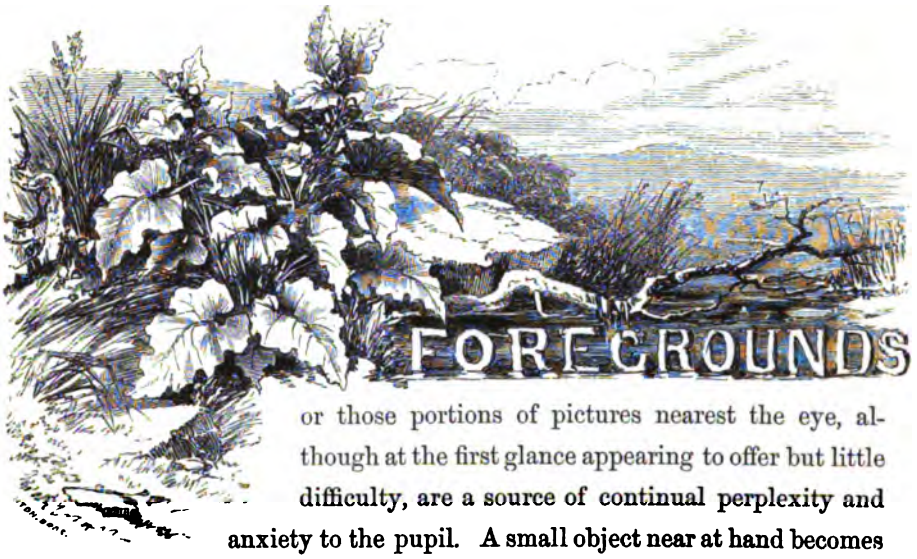
The student's attention should in the first instance be given to the careful and minute study of simple subjects, consisting principally of objects placed immediately in the foreground, with just that small portion of distance which is necessary to afford variety to the tints. Rocks, banks, cottages, and beech-stems, are well suited for the pupil's first attempts in colouring from nature, the objects being sufficiently large, while they are varied in form and colour by their proximity to the eye; also their details are easily seen, thus affording many opportunities for the practice of the pencil or the brush. Let him not overlook or despise such bits of rustic nature because they are not views of great extent or grand scenes; when he can paint portions of landscapes well, he may enlarge his ideas, or extend his

range of subjects. In our exhibitions we may continually observe how popular such scenes are with the British public, when depicted by the graceful, varied, and powerful touch of Harding, the bold and vigorous handling of Lee, or the careful and delicate refinement of Creswick. In subjects like these close at hand, bushes and young trees which fringe the banks, or that grow among the rocks, have a more separated and distinct touch than when the foliage is in larger masses; and like all foliage of shrubs and young trees, it points more directly upwards than that of older trees.

Addressing ourselves more particularly to colour, we find that the green of trees may be composed of many different pigments; but for water-colour painting, those which are nearly transparent are to be preferred, and in general the student will obtain great variety by mixing blue and yellow pigments. But some of these not being very permanent, those fading or deepening in equal proportions should be selected; thus he will find *indigo* with *gamboge* or *Indian yellow*, or, for a deeper tone, the same *blue* with *brown pink*, form a rich and natural green.

In Chapter III., Section III., on "the Handling of the Brush," directions have been given to use in the first attempts a neutral tint, so that the pupil, when employed in the practice of colour, may not have to encounter all the difficulties at the same time. In concluding this portion of the work, however, it may be as well to point out that there are varieties in the form of brushes which greatly facilitate the introduction of certain shapes and touches. Thus a large round sable in an eagle or swan quill may suffice for the broad and flat tints at the beginning; but it should not be so large that it cannot be used to give the outside terminations of the foliage with its true character, as this is generally better done at once, although light and separated sprays may be added at the conclusion. A flat and rather short sable is also used; and with it and some of the more opaque pigments, great variety of touch and form can be obtained; when the colour is thick, or gum or megilp is used, much the same effect is produced as is obtained in oil. The water-colour painter cannot fail to regard as a valuable power the facility of putting on the highest lights possessed by the painter in oil; but notwithstanding this, he should avoid as much as possible the employment of opaque body-colour, as, although it may add to the force, will certainly detract from the transparency of the work.

SECTION III.—FOREGROUNDS.



or those portions of pictures nearest the eye, although at the first glance appearing to offer but little difficulty, are a source of continual perplexity and anxiety to the pupil. A small object near at hand becomes of great importance when reproduced in a picture: if skilfully executed, the foreground possesses the power of satisfying the eye, and, at the same time, allowing it to pass on to the rest of the subject; but if overwrought, or too minutely finished, it is apt to engross the attention due to objects in the distance of far greater magnitude and interest; consequently a clear idea of the nature and purpose of the foreground is a matter of great moment. The capability of first engaging the attention without absorbing it is a most desirable quality; as an introduction, it may be compared to the overture of an opera, which conveys merely a general idea, to be more fully developed as the action proceeds.

The objects of which a foreground is composed, although well selected and carefully drawn from nature, may, on a first view of the picture, appear to want finish. This, however, on a closer examination, may be found not to arise from any deficiency of knowledge; in fact, an intimate acquaintance with the forms of the near portion of a picture, their lights and shades, reflections and variations of colour, should not lead the artist to elaborate

display or servile copying: his skill will be evident from the ease of execution, the variety of touch, truth of character, of surface, of colour, but above all, in the judicious control with which his work is executed.

Careful and varied studies from nature afford a facility of selecting such lines and forms for the foreground as have reference to the rest of the subject, they being indeed some of the objects in the picture brought close to the eye; and the cultivated taste of the artist will lead him to reject forms not characteristic, or which repeat those of the distance. From the continual action of rain or falling water, the forms of rocks, stones, and banks in the foreground will be convex; and although the most picturesque roads are strongly marked by ruts and inequalities, and banks or ground may be greatly varied by scattered rocks and broken surfaces, they should not bear the appearance of having been newly disturbed, but be naturally placed; and besides paying attention to the varieties of local colour, the appropriate light and shade must be given to each part.

It is sometimes alleged, as an excuse for inaccurate or careless drawing of the foreground, that it is not distinctly seen when the eye rests on the middle or extreme distance, it being at such time out of the focus of the eye. Doubtless it is so; but pictures are not to be judged by the strict laws of optics—they are altogether conventional; in nature we cannot look at distance and foreground without imperceptibly altering the focus of the eye; neither can we look at two portions of a picture at the same moment with attention without altering the direction of the eye. It will, therefore, be sufficient if our studies afford us the power of giving a general appearance of reality, reserving the most careful finish for those portions of the picture intended to attract the eye of the spectator. The apparent want of importance in some of the objects forming the foreground in the natural scene, and the continual motion of others, cause the student to pass them over as unworthy of notice; yet, in his after-attempts to form pictures, there is scarcely any question suggesting itself more frequently than, "What shall I put in the foreground?" Perhaps a few notes of actual conversations with an intelligent pupil on some of these occasions would show more vividly the difficulties felt and the manner of overcoming them; the student might then understand that paintings by our best artists are not so much com-

positions made at home as they are the results of careful studies and selections made at fortunate moments abroad. Thus they illustrate with great force the advantage of having the eye and attention trained to a close observance of nature.

NOTES.—Loch Duich: Heavy shower; Interior of a Hovel.

Pupil. "This interruption is very vexatious, for I had nearly finished my sketch; and although some lines of the mountains were not fortunate in their arrangement, and there was no foreground but a dismal peat-bog, that old castle, with the lake and mountains, would have made a good subject."

Master. "While we wait, could we not draw these old peat-baskets, spades, and barrows, which lie on the ground? Afterwards we will fill one of the baskets with fern, and hang it up in the position it would occupy on a girl's back: careful studies of these will be useful accessories for our figures and foregrounds.

"The shower over, remark how a portion of it yet falling hangs like a filmy veil over those lines of the mountains you wished to hide. What light and breadth it gives to the distance! What shadow to the middle of your picture! Take your brush, and put in that effect before it passes away; add notes of the evanescent effect in writing. See, the peasants are again at work digging peats, and some kilted urchins have brought an old white horse and sledge to take them home. Make a large and careful drawing of the horse and sledge. Good: these three hours have been well spent; and you now possess a correct study from which to paint when at home. Look, the sledge is loaded; some of the children sit half buried in the fern—a girl, with golden hair, dressed in a light pink jacket and maroon petticoat, is putting another on the top. Quick: take your note-book—sketch that action: the position once seized in real action, you can either place her in it again or get a model at home. Now a bright gleam of the setting sun gilds the whole group; how the local colours disappear under its powerful influence! Take a brush, white, and colour; dash in the general effect of those tints; note how prominent all the flesh tones are—the whole in perfect harmony, and would still have been so, although the colours of the dresses had all been crude, so immeasurably superior is sunlight to local colour. All the prominent parts are lit up with the sun, reminding us of the advice of our old friend, 'Always dig in with cool, and bring out with warm colours'."

"My sketch is finished, and it is a picture!"

"Yes, you have now a careful study, made under the usual daylight, and a memorandum of effect and colour. Remark, too, that agreeable and popular pictures are more the result of this prompt attention to accidental circumstances and effects than of a laborious heaping together of all the finest objects in the world. You admire Landseer's 'Forester's Family,' or some of Taylor's Highland lassies bringing

home fern or tending sheep. Had these artists not possessed an eye to note as well as a ready pencil to sketch such incidents, they would not have remained as pictures to enchant the world."

As an instance of the way in which an uneducated eye passes over what constitutes a foreground, another extract is given. Castle Donan, Loch Duich Ferry.

"This is a charming little subject; let us sit down on this mass of rock, and draw it before we cross."

"My sketch is finished, but I can see nothing for the foreground; the water of the lake is all gray, with a ripple on it preventing reflection.".

"Your sketch of the castle and distant mountains is very good; let us wait a little. Ah, the wind has fallen: the reflections of the castle, rocks, and deep-toned trees, are now distinctly seen, repeating the various forms and colours, at the same time hiding the parallel lines at their base, and blending both reality and reflection in that mystical obscurity that adds such a charm to this mountain scenery. In the water at our feet, the dark ruins of the old castle and trees contrast beautifully with the light reflected from the bright cloud; the ripples on the shore give an additional effect. Now the ferry-boat crosses with an old white horse, two cows, and one or two rustic figures. See, they are about to fasten it to the rock on which we sit. Let us retire a few steps, and include the whole group in our sketch. Notice the fine citrine and maroon colour of the sea-weeds and rocks; put in that light sail as it passes the point on which the castle stands—it comes in well there: add one or two of those white sea-birds; we have the power of placing these movable objects where we please, provided their position is natural."

"Why, I find I have a beautiful and appropriate foreground, without any other trouble than that of observing what occurs around me."

If, instead of a paucity of objects in the foreground, there appears a redundancy of form, accompanied with great intricacy of lines, it is well to begin with those of the most importance; such, for instance, as the ruts of a road or the largest mass of rock or stone, with bushes or a group of weeds attached to it: these having been secured, other forms of less importance may be added, so as not to interfere with those already drawn.

As foregrounds constitute much of the interest of pictures, and are in many cases the principal points of attraction, it is worth while to examine with some care the way in which they are handled. There should, in the first place, be great solidity and firmness, accompanied with variety of

texture and surface, in all rocks, stones, and broken ground. In oil-painting, and in the impasto style lately used with great effect and power, this is produced with comparative ease by the numerous processes at command; for instance, by loading on solid masses of pigments; by using the pallet knife to produce a crisp edge and a flat smooth surface, suddenly changing into another surface at a different angle; by thickly impasting on the pigments with large quantities of wax or other myguilphs, and dabbing, stubbing, or dragging a short bristly brush on them either when wet or half dry, or we may cause the hairs of the brush to separate by pressing it upwards or downwards (while in this condition for grass); in fact, using all our power of handling and the most varied tools with solid pigments, and afterwards by glazing with transparent pigments, aided by an equally varied assortment of vehicles, and with the power of taking away that portion of the glazing which lies on the prominent parts, leaving it in the interstices to give relief and depth. By the use of all these processes, and many more, stigmatised by some as tricks of art, but which, when employed with due subservience to the higher qualities, are exceedingly useful, oil-painters, and those who use the impasto style, are enabled to bring in high relief that part of the picture near the eye, and cause the more distant part to recede. The water-colour painter, however, must arrive at the same result with different materials; he must apply all the first washes and tints flatly, but with decision, so that the edges look almost too hard; in the succeeding tints, forms, and shadows, he will use a dryer brush, and change the pigment on the tip or point of it frequently, taking care that these changes of colour and these markings do not interfere with the general effect. He must avail himself of the various processes described before, to take out a portion or all of the colour from certain parts, and leave the form convex; he has a sufficient choice of rich glazing pigments to subdue any colour that may chance to be left too bright; and as a last resource, he may use Chinese white, adding to it the colour he requires, or glazing it down afterwards with gum and transparent pigments.

All these means are sometimes insufficient to overcome a thinness, or want of solidity, in our attempts to represent surfaces near the eye. To obviate this in some measure, a change in the texture of the paper, from fine

in the sky to coarse in the foreground, has been described in Chapter II. Section III. Vigour and boldness in laying on the first tints, notwithstanding a certain degree of harshness or angularity it may occasion, will be of essential service in producing firmness; these tints form a good foundation for the various processes of dragging, glazing, rubbing, scraping, or scumbling, which follow,—for the outside form must be given with decision, and breadth is produced with a full brush; it also gives the opportunity of varying the tones while wet. Over these first tints the secondary or intermediate touches are placed, the colour being continually changed by taking up different pigments with the point of the brush, or by allowing the hairs of the brush to separate, and producing variety with cooler or warmer colours. When the general form and tones have been given, and a certain degree of breadth obtained, it will be necessary to resort to the practice of taking out some of the lighter leaves by first touching their shapes in with water, and then rubbing them off briskly with the painting-cloth. To take out these with sharpness, the wetting must be repeated once or twice; and when the water is absorbed with blotting-paper, they must be rubbed out sharply with the cloth or india-rubber; if too light or cold, warmer tones may be added. By glazing in this way, warm lights and reflection can be given with great truth.

The greatest darks must next be introduced, either by dragging the brush sideways, loaded with different colours, or dappling in those of a deep, rich, and pure tone,—thus producing an appearance of intricacy and transparency not attainable by any endeavours to put them in by one blot of colour. When a clearly defined form is desired, it may be cut or scraped out with a sharp knife; and if the paper be rough and thick, additional texture will be produced by scraping off those portions of the tint on the eminences, and afterwards toning down the light parts. In all such manipulations, there is abundant room for showing dexterity; brilliancy must be preserved without gaudiness, sharpness and firmness of lines without mechanical hardness: always keeping in view the necessity for transparency in the shadows and opacity in the lights, and throughout recollecting to preserve the general arrangement of colour and breadth of effect. In giving variety of colour and form to foregrounds, as well as bringing that portion

of the picture into closer proximity to the spectator, there is no division of nature more effective than vegetation; and whether, viewing it collectively, we try to represent its general hue and the effect it has on the colour of the picture, or, taking one particular plant, or group of plants, draw it with that fidelity and attention calculated to attract the eye, it deserves our most careful notice. With the desire of preventing the loss of time which would result from an indiscriminate and laborious study of plants, and also to indicate to students in art the difference between the labours of artists and those of botanists, a few remarks on this portion of landscape study will be added. Vegetation must be viewed, not only as giving variety of form and distinctness to the near part of the picture, but as it affects the whole colour of the landscape. There are many plants insignificant in themselves, which become of great value to the painter when associated in large numbers and generally diffused. Under these circumstances they are of great importance, not only affecting the tone of the whole picture, but also indicating the season of the year. The first in consequence, and one almost universal in nature, is common grass, regarding it generally, and without dividing it into the various species; it is, therefore, more or less introduced into nearly every picture. The student must be careful not to scatter it at random over the foreground of his drawing, but in the first place indicate the surface of the ground on which it grows, correctly delineating the various little hillocks, and selecting those lines which, by leading the eye into the picture, aid the perspective. Blades relieving from the surface beyond, whether by light from dark, or the contrary, require notice. In general, these blades are either straight, or slightly curved lines, pointing in different directions, some being more distinctly marked than others. When in light, the strokes indicating them will be firmer than the rest; when in shadow, they may be allowed to vanish into indistinctness.

The next in importance are the heaths, abounding on the uncultivated barren moors and mountains of Scotland, and found also in smaller quantities in many parts of England. These give to the distant landscape that endless variety of russet, purple, and roseate hues which add such glowing charms to the view. Ferns also give a wild luxuriance both to forest and heaths; their form is so exceedingly graceful, that they deserve to be

finished with great care when near the eye; and, growing closely together, they also present large masses of colour, differing much from that surrounding them. There are many other plants conspicuous from their size, marked character, and general distribution over the country. One of the best known is the burdock; it is particularly useful to the artist, and forms one of his boldest and simplest foreground plants. Another is the coltsfoot, more attached to the borders of streams, which, when grouped with the water-dock, with its deep and rich-coloured blossoms, or the meadow-sweet, with lemon-tinted and clustered head, affords a pleasing variety of colour as well as form, and contrasts well with the repose of the water beyond. In the hedge-rows and ditches the teazel and foxglove will at once be recognised as possessing character, size, and colour, and therefore requiring a corresponding degree of attention. It is necessary to remark, that the introduction of all these plants into the foreground of pictures must appear quite easy and natural. Some kind of confusion may be allowed in objects which are thrown, or are growing, accidentally together; but breadth and simplicity must be observed, that the eye may not be disturbed by too many forms of the same size and distance from the spectator. With all the variety of outline and colour which plants, combined with rocks and broken ground, afford, the student will find that the foreground becomes a most interesting part of his picture. He will, however, look upon it only as a portion, and see that it is not divided from the rest by too sudden an alteration in colour, light and shade, or treatment. The parts must all combine to form an harmonious whole, each securing to itself that amount of interest to which it is entitled from the position it holds in the picture.

SECTION IV.—BUILDINGS, RUINS, ETC.

ALTHOUGH the Landscape-painter may, in most instances, dispense with the strict rules of architecture, yet it is highly requisite that he should study with some degree of attention the style and character of the buildings which he may have occasion to introduce into his pictures. Generally speaking, they will either be rustic or in the condition of ruins. The former, being for the most part irregular in their appearance, and offering little of architectural beauty, chiefly interest us by the association of ideas conveyed to our mind, and the variety both of form and colour presented to our view; the latter, frequently including portions displaying great elegance of design, give rise to sentiments of a far more elevated character: in either case, an accurate knowledge of perspective will be found indispensable to their truthful representation. This knowledge will enable the student to give to the various forms *reality*, even though they may be half destroyed by time, or partially

concealed beneath ivy, stones, and grass: it will impart that firmness of hand and decision of touch calculated to prevent the detached portions from deviating too much from the original direction; and it will thus leave the student free to add the colour and light and shade with a bold and vigorous brush, to draw the whole without interruption, and to prevent any of the parts from appearing either too new, too formal, or too architectural in their outline.

Looking at rustic buildings in an artistic point of view with regard to the effect they may have on the composition, we find that an irregular form and plan is as much to be desired in these as a correct and architectural completeness in the houses forming part of a town or city. This irregularity, however, is most picturesque when it is the result of time or accident; a similar observation being equally applicable to their colour. For example, it is seldom that a single white cottage of regular outline forms an object of interest; and even when such buildings are repeated in groups or scattered about the picture, they by no means contribute to the beauty of the scene; but when we see some quaint old farmhouse, built of rough stone, with its antique gable-ends and towering chimneys of fantastic shape, its roof formed partly of thatch and partly of tiles, the outbuildings straggling around, and widely-spreading walnut-trees overshadowing portions of the house, we at once pronounce the whole picturesque: time has varied the form and mellowed the colour, and thus connected it with the surrounding landscape.

Many old castles and gateways scattered throughout our land are divided in character, uniting much of the beauty of the rustic farmhouse with the grandeur of outline appertaining to the Norman ruin; these, how degraded soever they may be by the uses to which they have been applied, and incongruous as they may appear from additions intended to convert them into dwellings for the peasantry, still rank among the most pleasing of our subjects: such are Allington Castle, near Maidstone; Carisbrook gateway, and portions of Conway Castle. Of ruins less dilapidated in their form, and more elevated in their style of architecture, we have some fine examples in Vale Crusis, at the head of this section; also Bolton, Tintern, Netley, and Melrose Abbeys, with Kenilworth and Warwick Castles.

Fortunately our country abounds in these venerable remains of ecclesiastical and baronial structures; and happy is it for the landscape-artist when the owners, gifted with that refined taste which alone can appreciate their beauties, in taking means to prevent their falling into decay, are careful so to preserve their character as not to interfere with the sentiment usually attached to them as ancient ruins. Price, in his work on the "Picturesque," alludes to the false taste of those who level all the inequalities of ground about a ruin with the view of connecting it with their modern houses, or so-styled improvements. He says: "Fountains Abbey I never saw, but have heard too much of the alterations, which luckily were not quite completed. There is, however, an ancient castle which I have seen since that boasted improvement took place of making it stand in the lawn. The lawn has so entirely subdued and degraded the building, that had I not known it was really an ancient castle, I might have mistaken it for a modern ruin. Nor at a distance would the real size have undeceived me; for the old foss having been filled up, and the surface levelled and smoothed to the very foot of the building, the whole had acquired a character of littleness, as well as of bareness, from the flat naked ground about it.

"By filling up the fosses of a castle, its character as a castle is greatly destroyed; by removing the trees and brushwood, and levelling and smoothing the rough irregular ground, its effect to the painter, and its character as a ruin, are no less injured. What a system of improvement must that be which universally destroys character and creates monotony!

"I lately observed the same effect produced by the same cause on natural masses of stone in a walk near Matlock. The walk led towards the principal feature, the rock, which I had been greatly struck with from below, and was eager to get a nearer view of. On approaching it, I hardly could believe it was the same; but did not immediately conceive the cause of my disappointment. I had allowed for the bad effect, in such a scene, of a gravel walk, with regular sweeps and borders; but, besides that, the ground had been cleared, levelled, and turfed from the edge of the walk to the foot of the rock and round it, into all its hollows and recesses. Though an immense mass of stone, it hardly appeared natural; but seemed rather as if it had somehow been brought and erected at an enormous expense

in a spot which, as far as the improvements extended, was so little suited to its character."

It is the artificial effect produced by this want of taste that is so objectionable; the painter is content to see the ruin as left by the hand of Time, without even requiring the appearance of those details so interesting to the antiquary: to the former, should the ruin occupy a site which, from natural causes, it might be expected to fill, it is all-sufficient. The architect is anxious to preserve all the details of his edifice; the artist prefers hiding much of the repetition of form by ivy, bushes, or trees. Trees, indeed, form the most delightful association with ruins; their rounded shapes, the variety produced by their colour, and the relief the last-mentioned property affords the eye, occasion their frequent introduction into such scenes. Quoting again from Price: "Painters not only represent trees accompanying ruins, but almost in contact with splendid buildings in their perfect and entire state. Such an accompaniment adds still greater variety and beauty to the most beautiful and varied architecture, and by partial concealment they can give an interest almost to any building, however formal and ugly. . . . In regard to their being obstructions, or considered as such, that will partly depend upon the judgment with which they are placed, and partly upon the owner's turn of mind.

"Whoever prefers, in all cases, a mere prospect (and in that light every unbroken view may be looked upon) to a prospect of which the accompaniments had been, or seemed to have been, arranged by a great painter, will think every thing an obstruction that prevents his seeing all that it is possible to see in all directions. But he who is convinced that painters, from having most studied them, are the best judges of the combinations and effects of visible objects, will only look upon that as an obstruction which, if taken away, would not merely let in *more* of the view, but admit it in a happier manner in point of composition; and whoever has felt the extreme difference between seeing distant objects, as in a panorama, without any foreground, and viewing them under the boughs, and divided by the stems of trees, with some parts half discovered through the branches and foliage, will be loth to cut down an old tree which produces such effects, and no less desirous of creating those effects by planting."

LEIGHTON, BROTHERS

PLATE 19.

PRELIMINARY STUDIES OF BUILDINGS.

The colour of buildings has next to be considered; and this, of course, varies with the materials of which they are built, from the light and broken yellow of stone to the deep red and brown of bricks and tiles. The warm gray, varied by broken colours of still greater warmth, is very agreeable when contrasted with the deep greens of the surrounding trees; sometimes also the richer tones of the sandstones have an equally good effect.

In ruins, those greenish-yellow tones, the result of damp, may be introduced with effect; but in representing inhabited houses they should if possible be avoided, as they give an appearance of unhealthiness or stagnation, which has at all times a tendency to excite very disagreeable sensations in the mind.

The mode of handling the brush and materials should be vigorous and firm; and as this description of study is that in which the pupil should make his earliest efforts in colour, two examples are given in Plate 15, which, with the addition of the russets and warm tones in Plate 13, will serve to explain the colours employed.

A careful outline having been made of some rustic shed, such as is represented in Fig. 1, Plate 15 (a view among the slaty rocks of North Wales), the brush is filled with a warm gray tint of the middle degree of strength, that is, neither the extreme dark nor the brightest colour. With this tint the general tone is given with a deliberate and yet firm touch, leaving all the edges of the different tints of the right form; thus producing at once the shapes and divisions of the rocks and stones, and leaving the sparkling lights to be afterwards toned down by the use of some more decided colour. In this way the drawing of all secondary lines is made without any previous outline of each particular tile or stone. It is an important point that the pupil should effect this with a firm and full brush, as he will thus avoid that feeble, hesitating manner, the result of timidly filling up a previous outline. The colour is then changed, either by washing the brush or taking another charged with portions of rich warm burnt sienna, yellow ochre, &c.; and the sparkling lights left appear to be parts of the mortar, new tiles, &c. patched in. Lastly, the deeper tones and cast shadows are put in, and the brush dragged over some portions with slightly varied glazings of grays or greenish tones.

Should the distant edge of the roof be too hard, it may be subdued by touching it with a little water, and rubbing it off with the painting-cloth. In all these foreground parts of the picture, much of the brilliancy and richness of the effect result from the first firm and decided touches combining with slight yet constant changes of pure colour on the point of the brush, and the blending these together by the process of dragging the colours over the various parts. Fig. 2 is another example of this kind of handling; the colours of the roofs, being richer and deeper in tone, contrast well with the warm green of the elder bushes about them. Perhaps these elementary examples are scarcely so simple and broad in their treatment as the first blottings-in of a water-colour drawing; but as in colour-printing all the colours and vehicles are not so transparent as in water-colours, some allowance must be made. Afterwards the richer and deeper tones are added, the lights remaining the same, but by contrast appearing much brighter. After this simple example, the student should select some old decayed roof, greatly altered in form and colour by age and weather. Many such are still to be found: one, of which we give a description, was near Fairlight, Hastings; an old red-tiled roof, but much varied by yellow and gray lichens, which were disposed with reference to the hollows formed by the sinking in of the roof between the timbers. In drawing with the pencil, these hollows are frequently marked with greater force, and thus the indication of the gradual settling of the roof given. In this instance the vivid yellow and gray lichens attract the attention first; but it would be better to commence with the dull red and subdued gray of the original tiles, leaving the lights pure paper. The pigments used might be Indian red or brown madder and indigo for the red tiles; then cobalt and a little black on the tip of the brush, with the remains of the first tint—and with these varieties of the graver colours secure the forms, and draw the disposition and bends of the ridges and tiles of the house towards the eaves; and lastly, when these tints are dry, take brown pink, with Indian yellow or gamboge, for the mosses, tinging them in spots with purple lake or madder: for the most brilliant lichens, chrome, Naples yellow, and lemon yellow, will be found not at all too brilliant, if the building be near at hand and in the sun.

To assist the pupil in his reference to Plate 13, a few of the most useful mixtures of pigments are added, remarking that much positive colour is not desirable in buildings; on the contrary, they are more agreeable to the eye when their tones are neutral in character, or at times slightly varied by those of warm russet or grays. Even the red of tiles and bricks, though affording in reality as pleasing a contrast to the green of vegetation as the red dress of a figure, is not easily introduced; red, however, when broken in tone by time, or introduced in detached mosaic work, as in some of the buildings in Venice, is very harmonious.

The tones of buildings in limestone and other light-coloured stones may be imitated with *yellow ochre, yellow ochre* and *brown madder, yellow ochre* and *sepia, brown madder* and *indigo,* and *black,* according to the degree of coldness required. Raw sienna, used instead of yellow ochre, produces more of a transparent tone, accompanied with a slight inclination to greenness. (See Plate 13, Figs. 15 and 21.)

For stone of a deeper colour—such as granite, slate, &c.—or other stone in shadow, *light red, Indian red,* or *brown madder,* with *sepia, indigo,* or *black;* for cooler tones, *Vandyke brown* or *sepia,* with *indigo* or *French blue;* the same, with the addition of a little *lake,* or *purple madder,* to give a slight increase of warmth. Bricks and tiles are rarely painted of the colour they actually appear when new and close at hand; but as seen when either mellowed by age, and the tones produced by various mosses or lichens constantly growing on them, or deepened by smoke and patched with different colours. In this state they become picturesque. Their colours in light are chiefly founded on mixtures of *burnt sienna,* with *yellow ochre* or *Indian yellow, brown madder, light red, sepia,* &c. (See 16, 17, 22, and 23.) In shadow, the colours selected should partake of the rich warm grays—such as *burnt sienna* and *Vandyke brown, brown madder* or *purple madder,* with *indigo* or *French blue, brown madder,* and *yellow ochre* with *black.*

It must be borne in mind that a similar firmness in the handling, and a proportionate degree of purity in the tints, must be used on buildings in the middle distance. The colours selected may not be so strong, and may partake more of the gray; but the edges are to be equally defined, clear, and pure—not made with lines, but formed by the edges of tints. Suppose

The student who, ignorant of the collateral branches of his art, would nevertheless aim at pictorial representation, may be likened to a person who, indifferently acquainted with short-hand, should yet attempt to report a speech; for as the latter would be obliged to pause at each word to recollect the characters necessary to form it, and thus lose the spirit of the oration, so the former, while stopping to search for the means of effect, would fail to catch the fleeting beauties of the landscape.

Perhaps there are no circumstances under which rocks can be more effectively studied than when their surface has been laid bare by the action of water in one or more of its various forms; as, for instance, that of waves impelled by the ever-varying forces of the wind against the cliffs of a sea-bound shore, or of the more uniform rush of the foaming torrent as it sweeps down the mountain's side. Deprived of their covering of earth and vegetation, varieties in the formation of different rocks become more conspicuous, and the peculiarities of each description can be carefully observed. Mr. Twining says, "It is chiefly with reference to stratification that a large portion of rocks obtain marked and decided characters. This very general condition presents itself under the greatest variety of forms, whether it be in the magnitude, the disposition, or the distinctness of the stratified beds. At times the layers appear on so reduced a scale as to become objects of detail in the bank or broken fragments which form the foreground of a picture. Elsewhere they are so large that they are visible to the eye on a distant mountain, and influence its character, and to some extent its form; the connection being in many cases easily traced between the dip of the strata and the inclination of the mountain's slope or ridge. Thus, when the red sandstone forms the covering of mountains of a different formation, one remarks that they have flattened summits, which form inclined terraces, bordered by deep precipices. The slope of these terraces is always parallel with the strata of the red sandstone and with the slope of the formation on which they rest."

Landslips and great falls of earth afford also good opportunities for the study of the strata and their covering of vegetation, wherever huge blocks or fragments retain the position and form which they assumed when broken by the violence of the concussion. Whoever has passed a day among the

melancholy ruins of the Rossberg, and remarked the massive fragments and extraordinary positions of the conglomerate rocks, will at once perceive how different is their present appearance from what it was when they formed a part of the sloping sides of the mountain. Another landslip, caused by the undermining effects of water, is seen in the valley of Meyringen; and in this the strata are waved and contorted into a great variety of forms. Again, an excellent opportunity for study is presented by the fall of large masses of the red sandstone cliffs in the neighbourhood of Loch Ranza, Isle of Arran; and the author must be permitted to add, that, for the study of geology combined with picturesque beauty, that island affords most abundant sources of interest.

In road-side cuttings, quarries, or excavations, the artist will also find innumerable opportunities for examining the strata, and giving a few lines in the foreground with decision and truth; and even where rocks are broken down into débris, he will still be able, by referring to their original colours, to give the prevailing tone of the whole mass.

The study of rocks thus exposed will enable the student to decide upon the original position of the fragments so frequently found lying in the foreground, the nature of the rock of which they formed part, and consequently to indicate the direction of the lines of their stratification, even when not at once evident; whereas, without an acquaintance with their structure, he might be confused by their being strewn here and there by some convulsion of nature far from the spot where they were originally placed.

The young artist must give careful attention to this particular portion of his study; and he may be assured that by so doing he will be amply repaid for his labour. It merely requires those general habits of observation and industry which every one ought to possess; and from these objects presenting firmness of outline and decision of character, accompanied by that valuable quality of remaining unchanged either in form or colour, in the course of his practice he will gain continual accessions of power, and qualify himself to attempt those parts of the picture which, like trees, water, and clouds, require the facility of generalising forms and colour, at the same time combined with increased ability in the execution.

Artists as well as amateurs are too much in the habit of boasting of the

short time which their studies have cost them. In first attempts, the question of time ought not to come into consideration, the quality of the work when complete being all-important. The author, while yet a tyro, being engaged in company with Stanfield, and other artists, in taking a sketch of the East Cliff, Hastings, well recollects that his own study was finished in *three* hours; that of Stanfield occupied *seven*. The result, as the reader may suppose, neither ministered to the vanity of the younger artist, nor added to his progress so much as it should have done.

Some rocks afford the artist more opportunities of showing their structure than others; and, owing to this prominence of character, they seem to require a corresponding accuracy and system in their delineation. Such are the slate and schistose rocks, which present forms more angular and stratification more strongly developed than many others: they may be studied with great ease about the bed of the Conway and other streams in North Wales. It must be remarked, that rocks of this kind, viewed from different directions, appear under totally different characters; one side presenting a broad, even, and unbroken surface, the other divided into innumerable layers and lines. Although the colour of these rocks always verges on the cool gray, and the nature of the stratification produces many parallel lines, they are nevertheless very beautiful. In practice of this kind, it will be seen how constantly an artist's thoughts ought to be engaged on his work. On examining rocks subjected to the action of torrents, he will generally find their surfaces rounded off or convex; but when situated so that an eddy is formed, concavities, and even in some instances circular holes, can be observed,—the latter caused by the water continually whirling round small fragments, some of which may be found still remaining at the bottom. The colour is likewise subject to alterations, being greatly affected by the alternation of drought and moisture, and the consequent variety in the growth of lichens, mosses, or plants.

Granite is usually to be distinguished by the massive squareness of its forms; though when in positions where it has been exposed for a length of time to the action of the elements, it presents a smooth and rounded appearance. Its character of durability, and its imperishable nature, are well shown in the rocks towering above the Mer de Glace, called

Les Aiguilles; it is seen under a different form, but equally durable, in the huge boulders and tors on Dartmoor. Hard as it is in texture, it has been subject, in ages long past, to alterations of form occasioned by slips and fissures, which have thrown whole masses out of their original position. These changes call for careful attention on the part of the student, otherwise he may, by making these accidents too prominent, give a false idea of the general direction of the strata. Again, there is this peculiarity in the colour of granite,—one kind is a cool, another a warm gray: 'both, however are produced by small spots of colour, differing in degrees of purity and, tone, sprinkled together; viewed at a distance, the tints appear blended into one homogeneous tone. Both varieties may be seen together in the coping-stones and balustrade of Waterloo Bridge. The prevailing tone of granite is, however, greatly varied by the different coloured mosses and lichens growing on it, more particularly in those situations where it is subject to moisture, and partially sheltered.

Limestone presents more variety of form and colour than most rocks; it changes much by exposure to the weather, having at first a cool gray tone, but afterwards becoming much warmer and richer. By its varied and sunny hues, it greatly enhances the beauty of the landscape, whether introduced in the natural state of cliffs and rocks, or in the artificial form of ruins. It is much affected by the action of water, which causes stains and marks to extend to great distances, either in a vertical or horizontal direction; these discolorations, passing over irregular surfaces, joined to the lights and shadows of unequal intensity, give many opportunities for truthfully portraying its character. The marble limestone of North Devonshire and Dorsetshire has sometimes a very extraordinary waved and streaked appearance. Turner, in his drawing of "Lulworth Cove," has given a fine example of this formation, beautifully rendered in line-engraving by Cooke. Other plates of this great artist's "Southern Coasts" afford good opportunities for observing how careful he was in his drawings of cliffs and rocks. The student is more particularly referred for studies to those named the "Isle of Portland," "Tintagel Castle," and the "Land's End."

The sandstone rocks and cliffs of Hastings are rich in colour, varying from pale grayish tones, such as might be imitated with yellow ochre and

ivory black, or yellow ochre, a little indigo and crimson lake, to deeper tones of brown or purple madder, with French blue, varied with raw sienna. When the detached masses of sandstone rock are wetted with the waves this latter colour greatly predominates. The shingle on the beach consists chiefly of débris of the rocks above, slates washed from the rubbish heaps of the town, flints with scattered scollop and oyster shells. The prevailing colour, therefore, will be raw sienna, with darker and cooler grays interspersed. As the beach is washed by the advancing tide, the colour is enriched and deepened; but in calm weather a perceptible difference is seen in the water within a few feet of the extreme edge: it is there rendered rather more opaque and cooler by innumerable bubbles of air coming up out of the dry beach; and these, being carried back a yard or two in small round patches, contribute to form the foam of the waves. In rough weather, the air-bubbles are so largely increased by the dash of the waters that these smaller contributions are unnoticed. Foam produced by the waves of the sea lasts much longer than when the result of a waterfall; the colour also of the former is yellower and richer in tone. The moment when the wave has been hurled on the beach, and the foam and spray risen to its greatest height, appears the most favourable to the artist's study; he should then impress its general form and appearance on his memory. In certain parts of this coast pipeclay washes up, and gives an opacity and muddiness to the water very different from the appearance produced by the foam.

The chalk formation, although charming in the distant cliff, as in extended sea-views of our island, is generally too little varied either in form or colour to be of much use in the fore-part of a picture; it requires great skill in arranging both the composition and the masses of light and shade in order to render pictures containing large portions of it at all agreeable. Other rocks having dark or heavy colours are quite as difficult to introduce with good effect; among such are the red sandstone, with its heavy monotonous tone, and the deep purply gray and black hypersthene, so overpowering in its effect on the Cuchullen Hills, in Skye. The depth of these local colours can best be represented when the mountains are in light, for in shadow the peculiar tones would not appear so strongly marked.

However, in all these varieties of rocks, the artist must consider what

amount of interest is likely to be imparted to his works by the features of the different formations which he finds in nature. To copy all the minor details would be impossible; he can, in fact, notice only those portions that give point and character to the scene. With this view, therefore, he must firmly impress on his mind those characteristics of rocks which owe their origin to the action of the elements, of the restless sea, or the gushing stream. All these points, when copied with truth, contribute to the charm of the picture, the chief interest of which must eventually consist in that union of beauty and simplicity alone suited to the general comprehension.

Although some details of the way in which rocks should be represented have been given in the notes on Sketching from Nature, yet it will be useful to the young student to give some additional remarks on the mode of working this portion of the picture. The character displayed by rocks in general is most decided; their angular forms, their distinct and easily recognised varieties of strata and of colour, combined with much dissimilarity in the way in which their original colour is affected by exposure to moisture and the growth of lichens, give us the power of representing them with that boldness and truth which their nature requires. Solidity, hardness, opacity, angularity, must be expressed in every line and tint. The materials of the water-colour painter are, it must be confessed, not the best for this purpose; therefore, to compete with the oil-painter in this portion of the picture, and conquer this deficiency as much as possible, we must carefully select such substances, and modes of using them, as afford the greatest amount of power.

The general tone of rocks will be found to be grays of varying qualities, and, unless illuminated by a very brilliant sun, considerably darker than the grays of the clouds; but if these tones are made with the same pigments as those used for the latter, they will look poor and thin. Instead, then, of *cobalt* and *the lakes*, or *cobalt* and *vermilion* or *light red*, we must take pigments possessing more body and power, not rejecting even such as are semi-transparent or turbid. With a bold touch and full brush, we should lay on these first tints all over the masses of rock, to the apparent neglect of the smaller divisions, and even of the light and shade; then, to give more variety and richness to this ground colour, we should repeatedly vary it by taking

up other harmonising colours, floating them in while wet. In this way we may sometimes avoid showing any distinct form or angle, and yet produce the effect of a curved surface, or a surface having varied quantities of light or colour.

Let us suppose, for example, that in imitating masses of granite lying on a desolate moor, such as is depicted in Plate 16, Dartmoor, the general tone of which is gray, we fill the brush with *burnt sienna* and *indigo*, and a little *crimson lake;* we may then, without replenishing it with these, take up *brown madder* and *indigo*, which will harmonise with those already used, and yet give variety of tone. In this way *yellow ochre* and *sepia* may be changed for *Vandyke brown* and *indigo*, or *brown madder* and *sepia*. These rich, deep-toned, and variously modulated ground tints afford an excellent basis for either the warmer transparent colours or those more opaque, as well as supplying a solid tone from which to take our lights. If any of the tones of the rocks should be similar to those of the sky or distance, it will be advisable to change those on the rock by producing variety in the texture, if not in the colour; a tone obtained by small portions of pure colour, mingled or interspersed, separates immediately from a flat tone in the distance, apparently of the same general hue. This stippling or dappling in of pure colours, combined with the production of granulation by scraping out with a razor, and then touching down the lights thus obtained, gives an entirely different character to the tones; and by these means the distances are preserved without resorting to strong oppositions, either of colour or light and shade.

The first tints of rocks will often appear too dark; for, being put in before the loose foliage, grass, or the other tints surrounding them, they are contrasted with the white paper alone; but when the shadows of the trees, &c. are added they appear much lighter. By putting in large masses of colour with boldness, feebleness and dryness of style are avoided, the general effect is at once produced, and great breadth is the result. The shadows and markings should, when the first tint is dry, be done with transparent colours, sometimes warmer and occasionally cooler than the first. Thus, over a cool gray rock of *Indian red* and *indigo*, tints representing the moss, or any of the warmer portions, may be laid on, composed of

raw sienna and *brown madder*, or *Indian yellow* and *Vandyke brown*, or *brown pink*. Care, however, should be taken to avoid blackness and coldness in making these additions. Should the shadowed side appear to want reflected light, a portion of the first colour may be rubbed off, and some other warm and transparent or semi-transparent colour added.

All these delicate variations cannot be produced at first, for the result of such efforts would be only feebleness and thinness. The fissures and markings are now to be put in, producing firmness and crispness in the outline more by bringing up one tint with a decided edge against another than by any strong line, which looks artificial. If these markings, clefts, and fissures can be introduced, having in them variations of light, shade, and colour, as well as reflected light, great truth in the detail will be given, the breadth remaining uninjured. The final touches, comprising the putting on of light tones or smaller patches, with body colour and some of the warmer pigments; the rubbing out with water and a cloth, or scratching out lights, and then toning them down either with opaque or transparent pigments,—will give richness, variety, and opacity to the surface in light, while the shadows will be kept transparent and warm.

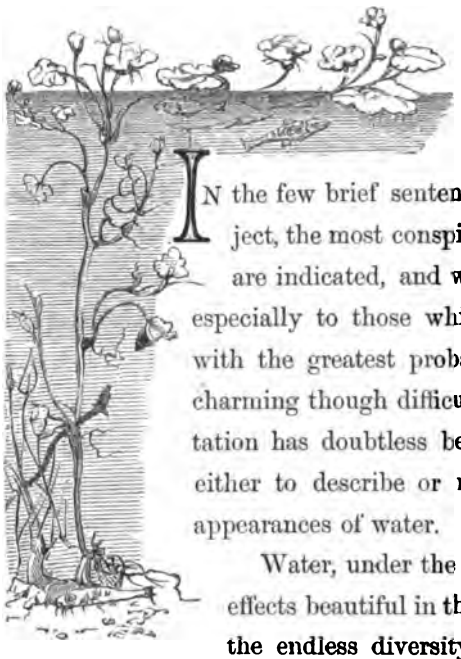
The effect at which the student must aim will be better understood, if he will at the commencement of his study take the trouble of going quite close to the mass of rock he wishes to represent, and examine well the different surfaces and tints. He will find that, although the general tone may be cool or warm gray, inclining to red, purple, green, or yellow, yet it is greatly modified by masses of rich greenish mosses, dark brown lichens, and even rendered lighter in parts by brilliant yellow or white lichens in rounded patches; in fact, that no considerable portion of the mass is of the same uniform tint. After this he should complete his examination by retiring slowly from the object, noticing how the colours are blended and harmonised together at different distances. The habit of generalising gained by such practice will be found extremely valuable.

For specimens of mixtures suitable for rocks, the student is referred to that portion of the table of grays comprising the deeper tints. It may, however, be mentioned, that *indigo*, with *light red*, *Indian red*, *brown madder*, or *burnt sienna* and *lake*, produces cool gray tones; *Vandyke brown* or

sepia, with *indigo* or *French blue*, grays partaking of the green tones; for warmer tones, *yellow ochre*, *light red*, and *burnt sienna* may be mixed with *Indigo* or *French blue* with *raw sienna* and *Vandyke brown* for glazing: in fact, by keeping in mind the difference in opaque and transparent pigments, most of them can be used, taking care at all times to avoid blackness.

In concluding these remarks on the study of rocks, we may direct the student's attention to the forest of Fontainebleau, where he will see fine trees and rocks combined; but he must not expect to find the falling streams or slaty rocks of North Wales, for the rocks are sandstone, and not much varied in colour; the soil also being sandy, there is no water: nevertheless there is much to interest the lover of nature in the fine old monarchs of the woods and in the wild gorges, the least artificial portions of the forest. Amongst these, the gorge D'Egremont and Bas Breau appear to present the most variety of incidents, abounding with picturesque white cliffs and a fine *point de vue*, which affords an extensive survey of the surrounding country; but in the Vallon des Peintres and Gorge de Neffleurs there are some of the finest trees in the forest. One of these, with fine scattered masses of rock, is so well known, and is so great a favourite, that a sketch of it is given in the accompanying vignette.

Fontainebleau.



SECTION V. (*continued.*)—WATER.

IN the few brief sentences that can be devoted to this subject, the most conspicuous of its pictorial attributes only are indicated, and we must confine our remarks more especially to those which the artist can hope to imitate with the greatest probability of success. It is indeed a charming though difficult part of his study, and some hesitation has doubtless been felt by all who have attempted either to describe or represent the different qualities or appearances of water.

Water, under the influence of light and air, presents effects beautiful in themselves, and truly wonderful from the endless diversity of forms it can assume. To depict water under some of these conditions would appear at first sight to offer no difficulty to the landscape-painter; but a careful examination will prove that great attention is requisite to enable him to represent it with truth and power. It must be studied under every aspect,—in those states likely to escape notice when, as mists, clouds, and rain, it becomes almost part of the atmosphere; and when, in perfect repose and solitude, the crystal lake, embosomed amid trees and mountains, reflects surrounding objects on its glassy surface, and brings as it were the heavens down into the bosom of the earth, and unites them in one harmonious whole. Again, when beauty rises into grandeur, and a sensation of sublimity is excited by the boundless ocean, the type at once of endless space and unceasing motion, the artist must still in all humility study nature under every phase, gathering inspiration and encouragement even while he feels the immeasurable superiority of the work of nature to any possible imitation from the hand of man.

In commencing the study of water, under that aspect offering the least difficulty in its representation,—the calm lake or pool,—its most important peculiarities must be examined: its colour, when pure or tinged by substances contained in it; its transparency, reflecting power,—all those qualities, in short, which are shown in degrees of strength varying according to the constant alteration it undergoes.

Pursuing our study systematically, we find that water, even in its purest state, causes great changes of colour in all substances over which it either rests or flows, generally rendering them deeper and richer in tone. The appearance of it when pure is again varied by the colours of the objects over which it flows being visible through it; and when to these variations is added the fact that its natural colour is liable to be affected by vegetable or earthy substances contained in it, rendering it more or less yellow, green, blue, brown, or turbid, according to the nature of the matter held in solution, with many other influences to be hereafter considered, it is evident that its study requires no small degree of earnest attention.

A portion of the difficulty of representing water may be overcome by acquiring the habit of copying it faithfully from nature, with the lights and colours either belonging to itself or reflected in it, whether the latter be of the sky or of surrounding objects. In order to command success in this, the laws of reflection should be studied, and the angle of vision in regard to the surface of the water remarked: thus analysing as it were the different effects, and noticing the colour of water itself when over some substance known to be white; then having examined the colour of substances over which it is seen,—such as rocks, sand, beds of weeds, &c.,—the result of the additional colour of the water must be observed, and in particular the student should learn to discriminate and represent with truth the difference between reflections of colours and lights and shades of the surrounding objects,—such as mountains, rocks, trees, plants,—and the sharp reflections on the glassy surface of the lights of the sky or sun. Shadows also require attentive consideration; if the water be turbid, they will be readily distinguished passing away on the surface in a direction opposite to that of the sun; but if it be perfectly pure, they will pass through it to the bottom, and thus become mingled with the colour of the water and reflections. Light

reflected by objects beneath, in passing through coloured water, is very different from that reflected from the surface; the latter being generally cool, like the lights on a polished mirror, while the former is rich and warm, and may be produced by transparent colours.

The transparency of water is not always easy of representation. If we are looking down on it when shallow, we can easily perceive and imitate it; but on looking along the surface of deep and clear water, it appears at a first glance more difficult, because the idea must be conveyed that we can look down to the bottom if we wish, but that without an effort the eye only passes over the surface. In consequence of this accumulation of difficulties, we are glad to avail ourselves of all legitimate means to assist in showing the varied qualities of water: thus boats and other objects floating on it are very useful, as, when looking under the dark bottom of a boat, we can often discern the depth of water, or even fish and other objects within it.

The colour of all substances is much altered when seen through water—those which are light will appear least changed; again, owing to the portion of objects reflected being generally underneath and in shadow, while we, placed above them, see more of the upper part in sunlight, the light and shade of the reflected parts will appear different from those of the real object offered to our view: thus trees in light may have their under branches in shadow reflected, but the upper branches in light will not be so much shown. Taking into account this alteration of the quantities of the different surfaces of objects reflected, the student must be aware that the quantity of an object seen in water will entirely depend on the position of the spectator: thus a person having his eye near the surface, and looking at a tree or rock on the margin of a lake, will find the length of its reflection in the smooth water exactly to correspond with the original object; the summits of mountains having their bases hidden will also be reflected at a distance equal to the height they rise above the line of water at their base: but as the spectator changes his position, and rises, the reflection is gradually curtailed by the hiding of the lower part of the object, until, from such a point of view as the Righi Culm, he sees nothing but the sky or clouds reflected in the mirror at his feet.

The effect of ripples on water is important; small regular waves lengthen

the reflection of objects, until, in the case of brilliant lights,—such as the sun, moon, lamps, &c.,—it is conducted to the feet of the spectator; we must recollect, therefore, that whenever these long reflections of the moon, &c., are introduced, they conduct downwards to the point of station. A ripple presents two surfaces, and may reflect two different objects or hues: for example, it may reflect, on the surface turned away from the spectator, warm light, from the sun setting just oppcsite; and on the other surface it may reflect the cool blue or violet hue of the sky behind. Most beautiful contrasts are afforded by these reflections, and they always harmonise.

In practice, the treatment of water should follow that of the sky and clouds; and as it associates much with them in colour, so it should partake with them of broad flat washes and tints laid on with a full brush, leaving decided edges of the right form. Softness and obscurity in outline is to be avoided here, more even than in clouds, as without clear and firm edges, given with a full brush rather than by a line added afterwards, no transparency will be obtained; and although in looking at the foam and spray of waterfalls or cataracts it is not easy to perceive how such broken forms can be produced by laying on tints with defined edges, a careful examination will prove that there is no other means by which a good conclusion can be attained. Suppose, for instance, the student to begin with the first broad tints which he has to use in representing a smooth expanse of water, they will most likely be composed of cool indefinite gray tones, at a first glance appearing much like those of the sky; but on examining them more carefully, it will be found that, except in the brightest reflections and ripples, they are darker and more of a greenish hue: yet in looking for the general tone with which to put in these first washes, the colour of the water must not be taken as it appears close to the spectator's feet, because that will partake of the colour of the bottom; for the eye, when looking down on any lustrous object, sees colours very differently from what it does when looking along its surface. The first tint should be rather grayer than the general tone, it will better represent the cool reflected lights of the sky and clouds; and when the second and other tints are laid on, these lights will appear still cooler. The student, by turning to the table of grays, Plate 7, can make those variations which the greater depth of tone and additional

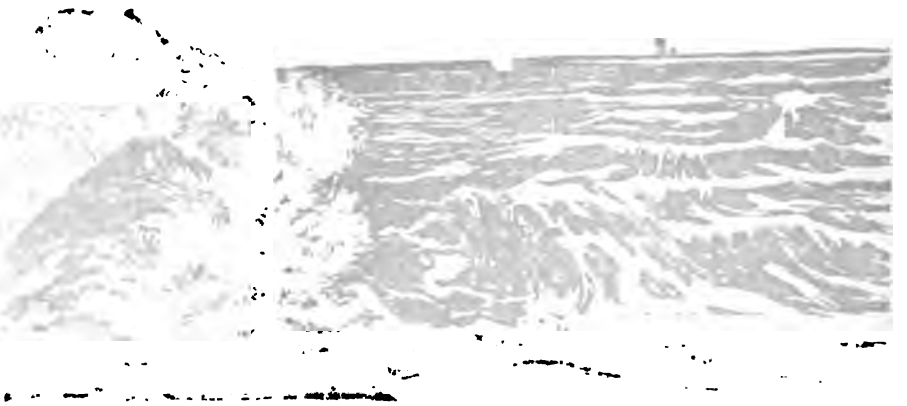


PLATE 17.

STUDY OF WAVES.

colour, either contained in the water or transmitted through it from reflected light, requires; thus he may in general substitute *raw sienna* for *yellow ochre*, and *brown madder* for *Indian red*. *Cobalt* may still be used extensively for all the first tones; but *French blue*, *Prussian blue*, and *indigo*, are better for tones when near the eye. The following mixtures may be employed for first washes; but the tints will of course depend much on the colour of the sky or clouds above them.

The general tone of water will be best given with *raw sienna* alone; or, if deeper or greener, with *brown madder*, *Vandyke brown*, or *Indian yellow*. All these tones may be cooled by mixing *cobalt blue*, *French blue*, or *indigo*; but if the water be very dark-coloured or in shadow, *brown pink*, *purple madder*, and *Vandyke brown* can be used. Sea-weed, or other plants under water, may be painted in with these colours, and glazed with *burnt sienna* and *indigo*, or *indigo* and *lake*, or *sepia*.

When water in motion forms a portion of the landscape, it always presents great difficulties to those who attempt it without system or order: to imitate shapes, tints, and colours so continually changing requires a disciplined eye and hand; and for this reason, it should not be attempted until by repeated efforts the student has acquired the power of remembering the forms and colours of any object he has once attentively observed. Even when he has gained this power, he requires considerable knowledge of effect; so that, having selected the light and shade from the scene before him at some fortunate moment, he may not be diverted from the complete picture impressed on his mind by any subsequent changes occurring in the effect. To illustrate this mode of study, and lessen difficulties, the author has drawn, in Plate 17, a wave breaking on some rocks. One wave has just broken, throwing up large masses of foam and spray. With a rapid but truthful pencil the horizon, the form of the rock, and the advancing wave, are indicated. With his brush full of a neutral tint of *indigo* and *Indian red*, or *brown madder*, but slightly varied as it approaches the near portion by a little *raw sienna*, the artist puts in a tint all over the subject, excepting only the highest lights, which he leaves of the true shape, sharp and clear: these are few in number, for it must be recollected that extreme lights and darks are in nature small in proportion to the middle tones. The subject

will then appear something like Fig. 1; a second tint follows, Fig. 2; leaving besides the highest lights many others over which the first has passed. In this second tint some variety may be introduced without altering either its breadth of light and shade or general tone. It may be made with *French blue* and *crimson lake*, with a little *raw sienna* for the distant water; but when nearer, *indigo* and *raw sienna*, with a little *madder*, may be used: the first tint will be the cooler or grayer of the two, as the reflected lights on the waves are to be left of this tone. The third tint, Fig. 3, adds the greatest darks, which may be varied in power as well as in colour. On the under part of the curling wave, they may be made with *indigo* and *raw sienna*, or *indigo* and *Vandyke brown*. It will require considerable attention to give the rocks an appearance of hardness, with rough and broken surfaces; tolerably pure colours of the secondary order may be stippled on, and by being thus intermixed will add to the depth, without blackness. The foam and spray may be obtained by the process of wetting with a brush some of the tints, and rubbing out with a cloth or india-rubber; the more separated spray must either be scraped out with a razor or sharp penknife, or put on with opaque white. In using solid white, it must be remembered that it represents the highest lights only, and on ripples or waves these are generally mere lines; if they are put on too broad, the water will no longer look transparent, but opaque and milky. Students should be careful not to introduce reflections of objects when, owing to the roughness of the surface, they would not appear. Waves broken into different surfaces will, of course, have their reflecting powers much disturbed and diffused; so that no distinct form—such as a buoy, a basket, or mast—can in such cases present an inverted image of itself.

Boats and shipping are most important accessories to marine subjects, adding great interest and life, while at the same time they assist in indicating the direction and force of the wind. It must be acknowledged difficult to draw them with the requisite truth, as the least deviation in line, or fault in perspective, causes a clumsy or heavy appearance, easily detected by any one accustomed to observe them, and exceedingly annoying to a nautical man. In his first essays, the student should begin with a boat lying on a sea-shore, such as is shown in Plate 8; the inclination of the keel on the

beach should first be drawn by a straight line, beginning at the stem or foot of the bow, and passing through to the stern; another line parallel to this may now be drawn through the centre of the boat, beginning at the bow, to the middle of the stern at the rudder; with this the seats, or thwarts, will be at right angles, the rowlocks, pins, or places for the oars, rather before these. With the aid of these most important points, the whole will be kept in perspective. The general tone of the outside of boats is a rich brown, occasioned by the colour of the pitch or other substances with which they are covered. With *Vandyke brown* or *raw sienna* these tones can be imitated very closely. The colour of the inside is generally different, being painted with opaque colour, and often of a dull red hue, which harmonises well with the subdued green of the sea.

Sails and rigging of shipping, and nets of boats, require great attention. In this study, like most others, a few notes made under the instruction of a practical sailor, on the position and uses of the masts, yards, rigging, and sails, will lead to the quickest and most correct modes of drawing them; they should be represented not only in calms, but when acted upon by strong winds. Many most beautiful forms and lines are afforded on such occasions by the sails and ropes, contrasting well with the lines of the horizon and waves near at hand. The colour of sails, nets, and rigging is also of great importance, being generally produced by a kind of tanning or dyeing process with a dark brown infusion, such as catechu, bark, &c. They possess a rich tone, varying from light gray or yellow, when bleached by wind, rain, and sun, to the richest *burnt sienna*, *brown madder*, or *Vandyke brown*, when fresh dyed; when light-coloured, and in sunlight, they materially assist the artist in affording opportunities for large masses of light, differing in shape from the clouds or waves, or contrasting with fine effect against the stormy sky or deeper coloured sails. Groups of boats, with their sails and nets hung about them, and baskets, tubs, anchors, &c. lying around, are among the most agreeable and picturesque of artists' studies.

How much soever the reflections of objects may be affected by the broken surface of water, even to their utter obliteration, the colour of the sky, clouds, &c. above will always materially influence that of the water beneath. In a cloudless day, with the blue sky reflected, the sea will partake of that

colour, gradually increasing in depth of tone as it approaches the horizon; but owing probably to refraction, or diminished strength in the colours and shadows by aerial perspective, it will frequently again become lighter before it reaches the extreme extent of vision. This change of colour is also partly occasioned by the greater purity of the water and the position of the eye with regard to the surface: on looking down on waves at our feet, we perceive a small portion of warm light transmitted through the water, and also warm coloured substances,—such as sand, beach, weeds, &c.,—floating in it, so that the foam itself may sometimes appear of a rich yellowish brown.

Brilliantly illuminated clouds frequently cast long reflections on the sea, considerably altering the colour; also, by the same power of reflection, under a stormy cloud of a deep purplish gray a purple hue is visible on the sea beneath; while under a warm glowing cloud in light a yellowish hue may be seen: the whole, however, must be kept in harmony in the picture. There are some effects in which we observe that clouds do not impart their colour to the sea, but appear to create a striking complementary contrast; thus, in the Mediterranean, we have often been surprised at the intense colour and decided form of an inky blot of shadow on the blue-green sea, and have found some difficulty in tracing it to an apparently light filmy cloud over our heads.

When the great varieties of colour observed in the sea are caused either by reflection, transmitted light, or are the result of clouds immediately over the part composing the picture, in this case they are easily understood; but some of these differences are due to reflections of tones of the sky behind our backs: thus we have observed, when looking out to sea at Hastings on a stormy sunset, that a heavy bank of clouds over the sea was tinged with a delicate purply red from the sun behind us, while the sea beneath the cloud was in shadow and a decided green, thus forming a very harmonious contrast of complementary colours.

Great differences exist between the effect caused by water when finely divided, as in mists or in larger drops. Mists, fogs, and fine rain obscure the landscape most; while heavy rain, in large drops, permits much to be seen through it. One cause of the admitted want of effect in the great

THE STAUBBACH.

PLATE 15

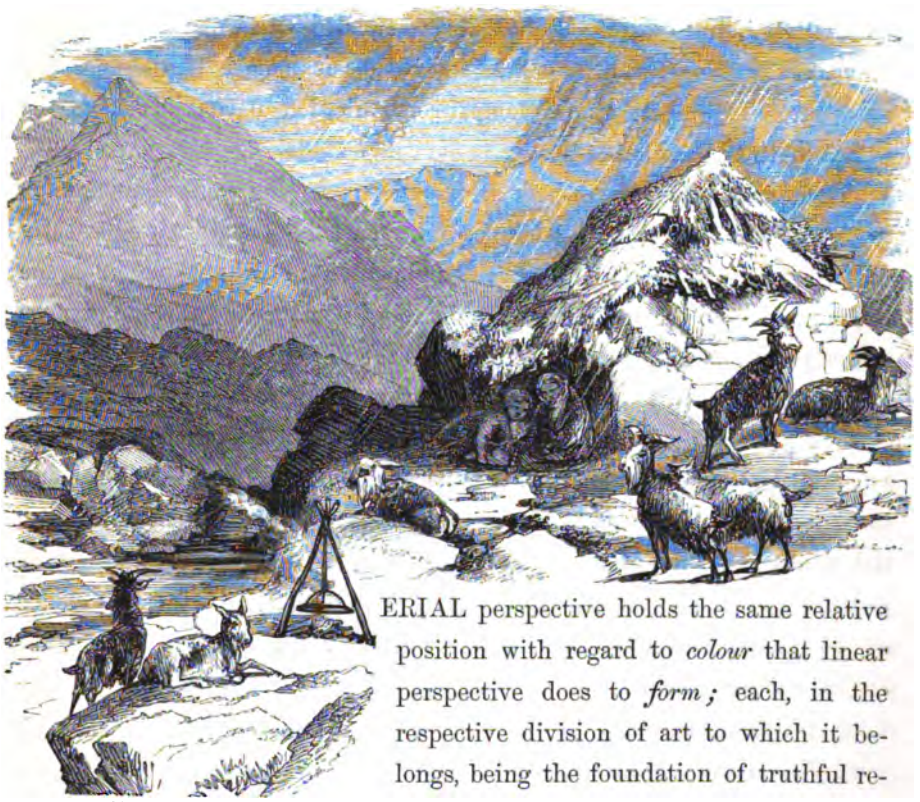
VALLEY OF LAUTERBRUNNEN, SWITZERLAND

fountains at the Crystal Palace may be owing to the jets being blown too much into mists, as well as being repetitions of the same forms and combinations,—not having also the advantage of fine masses of trees as a background, when they would sometimes relieve light against dark, whereas now they generally show as a pillar of smoke or steam dark against a light sky. They seem to require larger and grander treatment, and more variety.

A waterfall or cataract should be treated with regard to the handling in a similar way to foam or broken waves. Amid the greatest apparent confusion of forms and tints, certain shapes will be detected more constantly repeated than others. These should be secured by tints having firm and decided edges; for however unnatural these hard edges appear, they contribute much to the transparency of the whole when finished. Water that falls over a rock without separation will appear dark in tone, showing something of the colour belonging to it, and also permitting the dark colour of the rock to show through; but when this is admitted behind it immediately appears lighter. When projected at once from a rock or cliff, water separates into gushes or waves, having the largest mass the most in advance, and the more transparent portion following. Plate 18 is an attempt to represent one of the most exquisitely beautiful of waterfalls, "The Staubbach;" but to aid us in noticing its chief beauties, we will quote Cheevers's poetical description. "When seen in the early morning, glancing in the beams of the sun, just rising over the snowy summits of the Jung Frau and Silver Horn, while the rest of the valley of Lauterbrunnen still remains in shadow, it is most lovely. It has well been styled a sky-born waterfall; for it springs from off the cliff, and waves about in its descent almost like a bird of paradise, throwing itself into the air from the brow of the mountain. It is customary to approach it until it almost appears to fall on the head; but its extreme beauty is better seen and felt at a little distance. The eye then traces its course so long, and its movement is so checked by the resistance of the air and the roughness of the cliff, that it seems rather to float than to fall; and before it reaches the bottom, dances down in ten thousand little jets of white foam, which all alight together as softly as a white-winged albatross on the bosom of the ocean. It is as if a million of rockets were

shot off in one shaft into the air, and then descended together, some of them breaking at every point in the descent, and all streaming down in a combination of meteors. So the streams in this fall, where it springs into the air, separate and hold their own as long as possible; and then burst into rockets of foam, dropping down at first heavily, as if determined to reach the ground unbroken, and then dissolving into showers of mist so gracefully, so beautifully, like snow-dust on the bosom of the air, that it seems like a spiritual creation rather than a thing inert, material." After this glowing yet faithful description, it would appear almost hopeless to attempt to depict the Staubbach; yet, as it is often sketched by students as well as artists, we will describe the manner in which the original study, of which Plate 18 is a copy, was drawn. The outline being done, the first pure wash, consisting of cadmium and crimson lake, is carried over the sky, and with the exception of the snowy peaks and upper part of the fall, may be blotted-in with greater force over the cliffs; but as we draw near the base of the fall more gray should be taken up, composed of indigo and brown madder: these tints, or something like them, are to be repeated, but gradually more grays should be introduced, until the whole tone of the rocks and mountains becomes darker than the sky. The general shape and direction of the water is left by the stronger tints; and when these are dry, the waves, with their rocket-like heads, are drawn with a firm but delicate gray: two or three of these tints, each, however, having a firm edge, produce more appearance of mist and spray than many would suppose possible. Where the water is dissipated into thin spray, the colour of the rocks becomes more visible, the warmer rock tints being used for stippling-in. Careful use of the scraper and toning down with pure grays will also add to the indefinite character of the falling water; but still it is desirable to retain something of the meteor-like heads, or waves, as without these it might lose much of the character of a fall. The most opaque or whitest part of the fall will be as it collects together on the dark rocks at the base; the tints about which may be formed with *sepia* and *indigo, brown madder* and *indigo,* with *brown pink* in portions. All the lower part of the picture is to be powerful and dark, but indistinct; so that the eye is forced, as it were, upwards first, and descends with the water to the base.

SECTION VI.—AERIAL PERSPECTIVE.



Glen Sligachan, Skye.

AERIAL perspective holds the same relative position with regard to *colour* that linear perspective does to *form*; each, in the respective division of art to which it belongs, being the foundation of truthful representation. The consideration of linear perspective terminates with the outline or composition; but the study of aerial perspective must be continued throughout the whole progress of the picture, as, in fact, it not only embraces all the numerous effects of atmosphere, denominated by artists "the keeping of the picture," but is of the greatest importance in all contrasts or oppositions, whether of light and shade or colour. It is therefore highly desirable that the attention of the student in colour should be first directed to the examination of the effects of air on the real landscape, so that he may be able in his picture to imitate or introduce the appearance of it in varied quantities proportionate to the different distances. A pure atmosphere may be perfectly transparent and

colourless, presenting very little obstacle to our vision even when interposed between us and objects at great distances, as is evident in mountainous countries. In Italy, where the air is free from vapours, we can clearly see even minute objects when removed far from the eye; but in general, and particularly in our own climate, the air is so loaded with vapours of a bluish-gray tint that the appearance of distant objects is materially altered. The most careful examination and comparison is needed to convince us of the extent of this alteration.

There are many causes which contribute to vary the tones of mountains or distant portions of the landscape. Few surfaces in nature are perfectly uniform in appearance to any considerable extent; for the whole landscape is composed of objects differing considerably in colour, and the surfaces are also very unequally placed with regard to the light: so we have diversities of light and shade as well as colour, resulting from cavities, different kinds of rock or earths, and vegetation or foliage still more varied. All these separate colours become mingled together when viewed from a distance, and consequently produce an impression on the eye of some general tone or tint which is a kind of medium between the local colours most predominating; and it is observable, that in Italy or in Switzerland, in consequence of the greater freedom from moisture and the attenuated atmosphere, we can very truly retain the local colours for a longer distance than in England, where much moist air usually exists. In drier countries, then, we must be on our guard that we do not overcharge the distance with too great a variety either of colours or detail; for the limited power that we possess will not then permit us to represent the great difference that should exist between distance and foreground in our picture. In English landscape, however, we should avoid always recurring to pure blue to express distance, but endeavour to accomplish it by delicate refinement and variety in the tones. To realize in our study the effect of the intervening body of air, differing in degrees of density and occasionally in tint, it may be imagined as divided into very delicate films or veils, placed at certain distances from us, depriving objects of the strength of their colour and shadows in proportion to the opacity or number of the intervening veils; the lights are subdued until they become gray, and the shadows also, losing their strength,

blend with the former in the extreme distance, and produce a monotonous tint of bluish-gray. In the foreground of the picture, the colours may be supposed to have their true force, the lights in this part being brightest and the shadows darkest. The distance of a hundred yards may be represented by one veil, a mile by a second, four miles by a third, and the extreme distance by a fourth. If four veils of this kind are interposed at relative distances, even in a room, some effect of the kind will be produced; and it may be tried by using black cloth as the substance looked at. This effect has been attempted, although of course with diminished results from the want of natural colour, in the heading of this section. The distant mountain on the left has the same outline, only reversed, as the shed in the foreground; yet how different in size do they appear! one coming close to the spectator, the other miles away. When by such experiments, combined with the study of the real effects in the open air, the student becomes aware how indispensable it is to represent atmosphere, he will never rest satisfied until he can imitate the effect in his pictures; and he will no longer entertain the idea, common to the young and uneducated, that green or red must always be painted as they appear when near at hand.

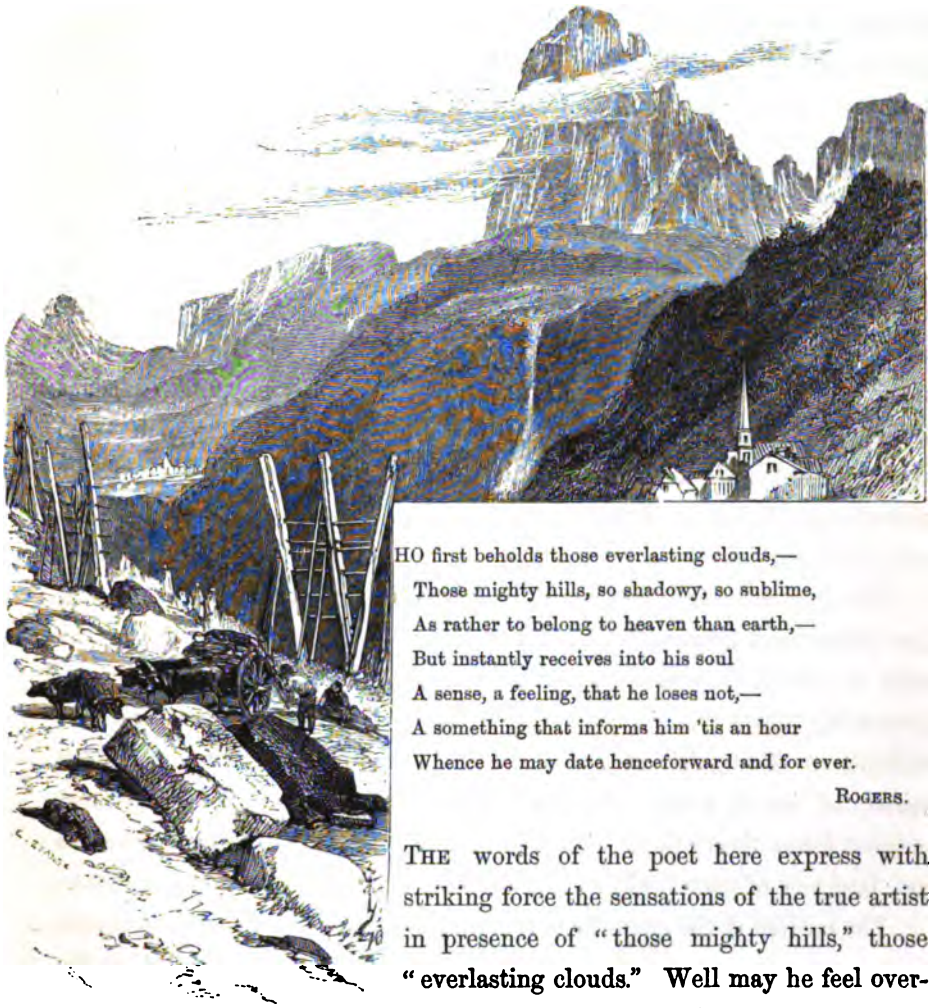
To secure a general approximation to the natural effect of air, water-colour paintings are commenced in the manner described in Chapter III. Section III., on "the Mode of Working," by laying on first washes of tints like those employed in the sky or distance; the bluish-grays are gradually changed for those made with madders, and in the foreground blue is superseded by yellow ochre or burnt sienna. The whole subject is thus toned down with three or four washes, differing in degrees of warmth and air, and prepared to receive the after-tones; while the eye is not disturbed by masses of crude white paper out of harmony with the colour or distance. It is not, however, advisable to bring blues or grayish neutral tints into the foreground, or to put in lights and shades with them, as was formerly the custom, because that practice destroys any chance of obtaining striking contrasts or pure colours; and also, as we have but a limited scale of colour or power, those pigments which are so peculiarly suitable to produce the effect of air must be reserved for the sky and distance.

In carrying out the aerial perspective of his picture, the student should

turn from one object to another, and notice if the effect is gained: thus, from a rock or tree in the foreground, he should pass at once over a mile to the rocks or trees in contact with them in the picture, but far removed in reality; he should examine his subject in every direction, whether passing from the foreground to the distance, or coming back again to the near parts, and ascertain that all the objects, or even parts of objects, keep their places; even the colour of the weather-stains on a house, or the tones of lichens on a mass of rock, must be represented in accordance with the distance at which they are seen. By this custom he will avoid relieving objects with equal degrees of strength against the aerial tones of the distance; there should be space or air represented even between the branches of a tree—some appearing near, others farther off. It will be advisable in this examination to pass the eye up the boundary lines of the picture, and also by cutting a hole in a piece of paper, and placing it over each object, see whether its general tone is suitable to the position it holds,—whether the touch or character is too large, or the texture too much shown; for even hiding all other parts of the picture, each object ought to have its true distance indicated to the eye. If the effect of aerial perspective has neither been secured by the first tints nor by the after-working, it can be assisted by touching with water, and taking out some of the dark portions, or by passing sometimes a wet brush over the texture, and so rendering it indistinct; also by employing with great caution a little Chinese white, delicately warmed with light red, yellow ochre, or cadmium, if the effect desired is warm; or a gray made with crimson-lake and cobalt may be used; and by scumbling with these opaque tones, using a dry brush, a semi-opaque tint is produced, giving great air and distance. In this manner a warm ray of sunlight, loaded with reddish or orange tones, may be passed across a portion of the distance or the branch of a tree, giving a dusky and warm effect which cannot be obtained in any other way.

In like manner, smoke can be better represented by scumbling these opaque tones over the dark colours of trees, &c., than by leaving any strongly defined shapes on the paper.

SECTION VII.—ON MOUNTAINS, DISTANCES, ETC.



Lang Kofel, Tyrol.

HO first beholds those everlasting clouds,—
Those mighty hills, so shadowy, so sublime,
As rather to belong to heaven than earth,—
But instantly receives into his soul
A sense, a feeling, that he loses not,—
A something that informs him 'tis an hour
Whence he may date henceforward and for ever.

ROGERS.

THE words of the poet here express with striking force the sensations of the true artist in presence of "those mighty hills," those "everlasting clouds." Well may he feel overpowered at the task which lies before him of attempting to embody the infinite variety of hues, the delicate gradations of tints, they present. Their forms must be given with decision, yet with the utmost delicacy of touch; their striking characteristics should be preserved, while their grandeur remains undiminished; yet their position, as belonging to the background, ought to be borne in mind, and the

interest they create should be of a kind entirely distinct from the emotions excited by objects in the foreground.

The aerial tones required to represent the air, sky, and clouds, do not in themselves differ materially from the hues and tints necessary in the delineation of mountains and distance; but the whole, when completed, should differ essentially in character; for rays of light can penetrate the former in every direction, while, notwithstanding the extreme tenuity of the colour indicating them, the latter must always appear solid.

The chief means by which this important character can be obtained is by devoting our first and most earnest consideration to the outline of mountains. They should be most decided in form, though delicate in colour; no blurred or indefinite edges can be admitted, there not being any such in nature. If there is a difference in the tone of distant mountains, it is rather more firmly expressed at the summits or edges in contact with the sky or clouds, owing to the contrast which there occurs between solid and opaque bodies; but the general mass of the tint should be devoid of any minute markings, because such details would not be distinguishable in the distance.

The first attention, then, must be given to the outline of mountains, that being most important. This varies of course with the nature of the rock of which they are composed; granite, slate, and limestone each possessing characteristic appearances peculiar to themselves, and not difficult to distinguish at a distance. These different formations afford variety of line to compositions; some presenting to the artist larger and grander forms than others. Thus granite is distinguished by massiveness and largeness of parts; while slate is characterised by thin layers or strata.

The outline at the summits of mountains is frequently so diversified with inclinations or slopes at different angles and unequal quantities, that the eye is pleased with variety, while the impression of magnitude is maintained. Obtuse angles of different degrees, alternating with slightly curved or broken lines, are constantly seen in those mountains considered the most beautiful. Beauty of form must not be considered to depend only on a certain proportion of straight lines, angles, and curves, but in the power of expression which some forms have to indicate the character of

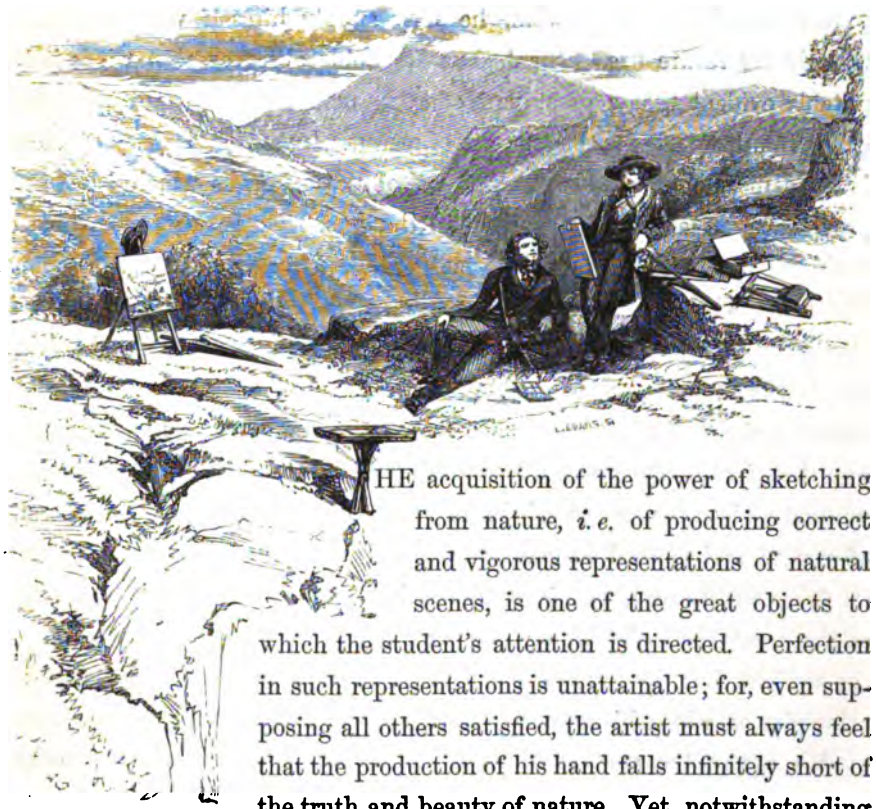
the body delineated: thus forms which all acknowledge as beautiful or graceful in the human figure would be far from deserving such epithets when applied to lines of mountains; neither would the loose and flowing character of the touch for foliage be in any degree suitable for hills.

In practice, we shall find that the first washes of neutral tints, generally composed of yellow ochre and brown madder, will be of great service if used with judgment. They should be put in with great delicacy, and rendered aerial by repeated washings between each tint, care being taken to vary the quantity of the yellow or the madder according to the tones which are to be placed over them. These preliminary tones can almost always be passed over the mountains or distance, as they are darker than the sky: without these tints to harmonise the whole, there would appear much crudeness in the colouring; they also assist in giving the solidity belonging to opaque bodies. It is not, however, necessary to confine ourselves strictly to the actual tints used for the sky; for when passing these first washes over mountains, more richness and depth may be given, particularly in descending from the summits towards the base, or in approaching the middle distance, if the tints are worked with a full brush, and permitted to run into each other without the sudden separation caused by allowing them to dry; and at the time this is done the colour can be increased or modified by taking up other tones on the point of the brush. No mode of working will be so productive of aerial tones, and preserve the granulation of the paper so well, as leaving each tint to dry thoroughly, and afterwards washing it well with plenty of water; which carries off all earthy particles of the pigments that may have settled into the interstices of the paper, and also allows of washing up portions of colour which may be laid on too dark, and of obliterating any lines where tints may have joined: the granulation of the whole is, if lost, restored by this process, and an opportunity given to alter the tone, if necessary, by laying on a wash of some pure transparent colour of a different hue. In sketching from nature it is, however, not possible to resort to these washings; we must then trust more to the skilful management described in Blotting-in, "Mode of Working." It frequently happens that one transparent tint of pure colour passed over another like in character, but differing in tone,

will be better than mixing the two on the palette previously. It must, however, be remembered that the colour last laid on will appear stronger in proportion to its depth: more transparency will result from a repetition of these apparently tedious processes than from giving the full depth by a strong tint at once. In respect to the extreme distance, when the horizon is visible, as at sea, the sky tones may be passed over it without leaving any smaller lights, as they can be better taken out afterwards. The middle distance is produced in the same manner, and with little variation of pigments, excepting the substitution of more powerful colours instead of those previously employed.

By referring to the Table of Aerial Grays, Plate 10, many combinations of suitable pigments will be seen. For the first wash, a neutral orange, composed of *yellow ochre* and *brown madder;* using more *madder* where the tones that follow are to be gray or blue, and *yellow ochre* predominating where light and warm tones succeed. Greater brilliancy and purity are produced by *rose* or *purple madder* and *cadmium;* but these qualities are more requisite in the sky than in mountains or distances. When parts of mountains are in sunlight, washes of *light red* and *yellow ochre*, or *cadmium*, with *lemon yellow*, may be used. However light the tones of mountains appear, no opportunity should be neglected of comparing them with white paper placed in the same light; for the amount of tone on objects is not evident to the eye unless we avail ourselves of such aids. By comparing the strength of these tones, we shall learn to give them only that force that our limited power will allow, keeping them properly subservient to the brighter lights, for all must be in proportion: we work with pigments, and on paper, dull in comparison to the brilliancy of light. In nature, an opportunity occurs of ascertaining the degree of tone or strength of colour there may be on mountains by noticing them when their summits are covered with snow, white being the only colour which does not alter by the interposition of pure air.

SECTION VIII.—SKETCHING OR STUDYING IN COLOUR FROM NATURE.



Moel Siabod, North Wales.

THE acquisition of the power of sketching from nature, *i. e.* of producing correct and vigorous representations of natural scenes, is one of the great objects to which the student's attention is directed. Perfection in such representations is unattainable; for, even supposing all others satisfied, the artist must always feel that the production of his hand falls infinitely short of the truth and beauty of nature. Yet, notwithstanding his insufficiency, how delightful is the possession of a faculty enabling him to perpetuate even a dim reflection of a scene, the loveliness of which has given him an intense feeling of pleasure on beholding! The labour of months, or even years, of study that must precede its full acquirement in all cases,—not even excepting those of the gifted few, in whom the possession of genius in some degree supplies the place of laborious application,—is most amply repaid by the attainment.

The study of nature is not the exclusive privilege of the accomplished artist: the beginner also, after acquiring a knowledge of perspective and

a certain command over his materials, must, as the indispensable means of attaining facility in representing nature, study her features under the multiplied aspects presented to his view during the constant changes they undergo. The opportunity of thus going to the source of all natural beauty should be constantly used by the student, as while there, drinking the purest draughts of inspiration, he may supply himself with a store of thought for future use. Sir Joshua Reynolds observes, that "it is indisputably evident that a great part of every man's life must be employed in collecting materials for the exercise of genius. Invention, strictly speaking, is little more than a new combination of those images which have been previously gathered and deposited in the memory: nothing can come of nothing; he who has laid up no materials, can produce no combinations. The artist who has his mind thus filled with ideas, and his hand made expert by practice, works with ease and readiness." System and method are, however, necessary to enable him to derive the full benefit of these mental and practical exercises; for the experience of the author convinces him that time is often wasted in repeated and desultory efforts, undertaken without a clear conception of the object to be attained. Let the necessity of system and method be well understood in the first instance, and then let full consideration be given to the best and easiest modes of arriving at the result desired. This will eventually not only lessen the labour of the student, but, by constraining him to define and reduce to practice the principles on which his art is founded, tend to his more rapid advancement.

We advise the student to make choice, as his first sketch from nature, of some object of simple outline, or one where light and shade can be combined with form; for objects of large and simple proportions, having few divisions in their parts, and these very decided, are to be preferred: and as in this instance form is more important than colour, the latter should be such as not to interfere with his clear perception of the divisions or gradations of light and shade. In the first period of studying from nature the objects should be near at hand: an old stone pump or horse-trough, a mass of rock, the end of a thatch-covered cottage with a few posts, or the lower parts of stems of trees, banks, &c.,—all these are excellent subjects for first efforts; and as they occupy the foreground, no difficulty will arise

from aerial perspective or intricacy of colouring. After some practice in sketching such objects, a foreground plant or group of plants, as burdocks, coltsfoot, &c., with a portion of bank, rock, or stones, to give variety to the form and colour, may be attempted; after these may follow groups of foliage, combinations of rustic cottages, bridges, &c., with roads and trees. In this manner the student becomes progressively acquainted with form, light and shade, and also with the variations of colour presented under the influence of accidental light and shade; he learns to recognise all objects, however hidden or altered they may be by effects of atmosphere, &c., even when they are scarcely to be distinguished in the middle or extreme distance, because he has, by close inspection and careful imitation, become well acquainted with their true character and appearance.

The next point should be to acquire the power of representing objects, or groups of objects, in the middle distance in conjunction with those in the foreground; to compose their colours, tints, and shades, and to note the change produced on them by the atmosphere, &c. At this distance, objects are sufficiently removed from the eye to permit the shadows thrown on them by other objects, or by clouds, to be observed,—causing much diversity of effect. Lastly, he should attempt the delicate tones of mountains and extreme distances, endeavouring to realize the space and grandeur of the scene, at the same time giving the true colouring exhibited under the varying influence of light and shade.

The author earnestly impresses upon the student the necessity of going to nature with an unprejudiced mind, and a taste cultivated by a constant consideration of the works of the best masters; a perfect manipulation and power of using his instruments, and a thorough knowledge of the qualities of his pigments: and let him join to these acquirements the simplicity of a child to receive impressions, and a love of the truth constantly before his eyes in nature. With such a temperament and an enlarged view of his vocation, let him commence his study, and carefully copy those portions of nature he has selected, somewhat in the order in which they are mentioned in this work; and not merely one example of each, but several specimens, varying in position, in season, and in time of day: taking heed lest he become partial to any one, and unawares consider it a type of the

whole; for though it may be comparatively easy continually to paint similar scenes under similar effects, it would confer on him but little benefit to be constantly repeating the same studies. To draw repeatedly a single leaf or branch of an elm, at one time or season, would scarcely serve to give a true idea of the foliage; to study only limestone rock, or only slate, will not be sufficient: the objects should be drawn at all times and with equal care, and thus mannerism will be avoided. If the Greeks had studied from one model or one man only, in one action, they would never have acquired the power and natural grandeur displayed in the Elgin marbles. They saw the human figure continually in action; and, with perhaps fewer opportunities for the study of anatomy than the moderns possess, they have produced works which still command our wonder and admiration. Taking such an enlarged and comprehensive view of the study of art, the student, after gaining a knowledge of form, will learn how he may leave it undefined,—after acquiring a knowledge of the natural colour of each object in the foreground in the larger view of nature, how it is altered by air, reflection, and contrast.

To represent, or rather endeavour to represent, all parts of a picture, with the forms as carefully made out as if seen through a magnifying-glass, is not the province of an artist. To consider the colour of trees as always green, or of bricks as always red, is to take an erroneous view of art. Let the student also try to represent *light*, *air*, and *space*, and to give to each object in the picture the relative value it possesses in nature at the moment he views it.

As an illustration, we may refer to a delineation of the human figure. When clothed, the head, face, and hands generally claim notice in the first instance, as being the only parts uncovered; of the face itself, the eye first strikes the attention, next the mouth, and so on with the other features. When the figure represented is nude, the outline, form, &c., rise in interest, compared with the face, which no longer engages the chief attention. In this manner, we observe how one part is at one time most conspicuous; and again how, under other circumstances, it loses in interest, while the surrounding parts gain in proportion to its loss.

The great desideratum is, the possession of a mind so educated, a glance

so comprehensive, and a memory so good, that when once the subject has been seen under a perfect effect of light, shade, and colour, &c., it may be treasured up with all its parts in their relative order and importance; so that although the artist in realizing his impressions may give to each point in turn greater value than it should possess, he may, in combining them to form the whole, so arrange and control the various materials, that while, by using the knowledge which this minute study has given him, he renders the details perfect, he still keeps them properly subordinate, sacrificing them, not unfitly, to the general effect of the picture.

Studies of colouring from nature should always be large, and drawn with the greatest care; using pure white paper and moist colours. The advantages which attach to the study of the figure on a large scale have been well described by Haydon in his autobiography; and as his observations are applicable to landscape, they are here introduced. "Large pictures, by the immense knowledge required, give you the power of painting small ones better than if you painted small ones all your life. Because, after the detail required by large works, you give the masses only in small ones, with such decision that this work sends you back to a large canvas with more love for masses than when you left off. A painter in large, when he paints small, compresses his knowledge; but a painter in small, when he enlarges, extends his ignorance. It must be so. This is the reason Rubens's small works are so exquisite, and, indeed, all the small works of great painters."

By a careful search into the truth of nature, without allowing the mind to become enervated by long reliance on other persons' representations, the bad effects of too much copying will be prevented; a style will be formed on the true principles of art, combined with a thorough knowledge of nature and her laws; and the false idea of power which may have been gained by the laborious idleness of copying,—often pursued from a disinclination to encounter the anxiety and trouble of following out with simplicity and faithfulness the wonderful variety of nature,—will be removed. The student must be prepared to find that these first studies are in their execution deficient in style, ease, and variety of manner; but what they want in these qualities is abundantly compensated by freshness and originality of thought. They

will not be, like the copies formerly produced, mere repetitions of another person's thoughts; and, as to the attainment of excellence, it would be as unreasonable to expect from a schoolboy that his first effort at composition should be perfect, or from the juvenile orator that his first speech should equal the orations of distinguished speakers, as that the student's first efforts in sketching should approach the productions of masters in the art.

In a lengthened sketching tour, a useful check on the natural tendency of young artists to repeat favourite subjects and effects will be found in the practice of viewing their sketches altogether at short intervals of time. Spreading his sketches over the table, the young artist will at once detect whether they represent too often one class of subject, one time of the day, such as sunset or sunrise; whether the lights in his sketches always enter from the same side, or whether trees are chosen too frequently because the foliage is easy of execution. By this sort of examination, it will be perceived if the costumes of the figures have all the same colours and oppositions; and, in short, he will avoid the mortification of the amateur portrait-painter, who found, upon hanging up his collection of portraits, that he had painted the whole of his friends in profile, and that all looked in the same direction.

While engaged in the interesting study of nature for the purpose of imitating her, we should accustom ourselves to make notes, either on the back of each sketch or in a small book kept in the pocket and ever at hand. These notes should clearly but briefly indicate any peculiarity of form, colour, or effect; and will be afterwards found of great service in explaining or enforcing ideas imperfectly rendered by the brush or pencil: they will also enable the student to examine and reflect on the subject with yet greater attention should he desire to paint a picture from any of his sketches; for then all these aids will be found of importance. The note-book can also be used to try the effect of a few lines in the composition of the subject, or in a rapid arrangement of the light and shade.

When sketching from nature, we have to attend to three principal points: close observation of nature without prejudice; careful and dexterous imitation of the different parts with our materials; and lastly, to make faithful notes of minute circumstances not readily represented without description.

Perhaps a few examples of such notes, taken somewhat at random from sketching excursions, will explain the value of this practice, and at the same time indicate the parts of the country best suited for the student's purposes.

NORTH WALES is well adapted in most respects for the landscape-artist. The scenery is bold, the rocks are striking in character, and the country abounds in water, falling as well as in pools, with the advantage of foliage of sufficient variety. In addition to these qualities, it possesses others which materially affect the artist who wishes to study for any length of time: the innkeepers arrange their terms, their hours of meals, and their accommodation generally, to suit artists; and some of the pleasantest hours of a landscape-painter's life may be spent in the quiet study of the various rustic spots which abound in that vicinity. But there are many other places equally picturesque, where the enthusiastic lover of nature and art can exercise his pencil without any interruption by day, or any break to the continuation of his thoughts by night. Some sketching notes, made during an excursion in the VALLEY OF DOLWYDDELLAN, will explain practically the author's meaning, premising that, as morning and evening afford the most varied effects, including sunrise and sunset, the sketcher should always endeavour to be out at those times, taking the middle of the day for rest and refreshment. To lose the lovely tints of evening, because he is either occupied in dining, or from the fatiguing effects of a long day's study, would in a landscape-artist be inexcusable.

"*Aug.* 20.—*Four o'clock.*—Went across the Llidder, over the suspended salmon-trap, ascending the course of the stream: many excellent nooks for the sketch-book, with rocks, birch, still pools, and clear reflections. After about a mile, came to stepping-stones, which, being more varied in size and direction than usual, and having a huge mass of rock, with a few stunted and rough alders growing out from its base, and almost lying on the surface of the water, made a beautiful foreground to the view of Moel Siabod up the valley. The afternoon was warm but misty, causing the mountain to appear more distant than it really was. The sun was setting nearly over the mountain; and thus, being behind it, made the whole mass appear a broad and flat gray, rather lighter towards the base. The cliffs and ranges of hills up the valley were divided into three or four distinct tones of grays, varying in warmth according to their distance from the eye until the rich tones of the green of the nearer trees and meadow-grass and hay were relieved against

them. Bed of stream sprinkled with slate rocks of different shades, the reflection of which with the bushes gave great variety; the whole of the stream above the stepping-stones as dark as the distant mountain; but, owing to the ripple and slight fall there, the water was light, reflecting the rich yellow tones of the setting sun: these tones contrasted well with the deep maroon and purply tones of the rocks in shadow and reflection. Greatest contrast of light and dark about the large rocks; greatest breadth of light in the sky; reflection of sun a long beam of warm yellow; general tone of sunset, yellow, in good harmony with the purply gray rocks and cliffs. Girl and child crossing—rich citrine petticoat, orange neckerchief, white jacket; child warm rosy colours. Action of crossing on these large stones not walking, but succession of springs—same leg foremost."

Stepping-stones are very interesting incidents in a picture; but in general, owing to the equality in their height, size, and the direct way in which they cross the water,—being frequently parallel to the base line,—they are difficult to manage. When varied in size, as in the present instance, or when accompanied by rocks, bushes, &c., or when commencing or ending in a broken or shelving bank or shallow bed, they are very picturesque, and frequently give rise to a pleasing incident, or facilitate the introduction of a figure, dog, &c., with their appropriate reflections.

"*Aug.* 21: HUGHES'S FALLS OF CONWAY INN: *Eight o'clock.*—Our landlord took us to a wild ravine through which the Conway rushes, called Fosse Noddyn; the scene much enclosed; the rocks on each side of great but unequal height, overhung with trees; the opening through at the extremity very narrow, with reflection in the water, a beam of light. Determined to make the drawing upright; try for the grays of the morning, always the most difficult to get; contrast them with warm sunlight on rocks in foreground. Sat till twelve o'clock; found light altering in direction, and getting too warm. Went again three other days same time. Greatest mass of broad dark in the middle distance; trees deep olive; all the colours, both of rocks and trees, in fore part of subject lighter in tone than middle distance; greatest dark contrasted with fall of water in light; reflections in water deep green (made with Vandyke brown and indigo); general tone of water very dark, excepting reflection of light and sunlight on distant trees, which was bright yellowish green; moss, &c. on gray slate rock in foreground rich orange (burnt sienna and brown madder). The portions of foam, as they come down the stream, give to the curvature of channel perfect quietness and solitude; otter crawled on a shelving rock with salmon in his mouth. Although much overhung with trees and shrubs, must not lose the sky by putting in all their straggling branches, as this is the only part of the picture where the light can be broad."

On another leaf occurs a note of the colours for a figure, always a point of difficulty to determine afterwards:

"While studying a salmon-trap, man and dog came to examine it: green velveteen jacket (faded), pale raw sienna in light, cool and indefinite in shade; red neckerchief, bright basket, rod, and pole."

Still continuing to study in this same neighbourhood, which, besides the advantages of good subjects, has also generally that of the society of minds earnestly devoted to the pursuit of art, I find in my journal a description of a rocky river scene studied with some care.

"*August* 25.—Went down below the house to a place where Hughes said we could cross the river Conway. Accomplished it by crawling and scrambling from one huge rock to another; nearly lost umbrella, stool, and pike by throwing them on to a sloping rock in advance. These short cuts not desirable for an artist, as they exhaust him and make his hand shake, besides causing him to become too warm for the quiet and still occupation of sketching. Determined to make a careful study, imperial size, of some large boulders of slate and schistose rocks lying in bed of river, the colours of which were warmer and more varied than is usual with slate,—admitting the principal mass of light to be on them, conjointly with a little fall of water between them; a battered trunk of a tree, almost without bark and the roots up, was hitched in among the rocks, adding to the wild and picturesque confusion, and giving variety and warmth to the colour; strata of loose rocks in different directions, showing that they are not in position, but brought there by floods; lights on largest mass, yellow ochre and brown madder; moss, brown pink; shadows, Vandyke brown and sepia, and black with yellow ochre—sometimes cooler, and then to be made with the same colours without yellow ochre, but with indigo and French blue; reflection of warm light on water at the bottom of rock, raw sienna. Torrent rich in colour to-day owing to rains; as long as water glides over the rounded surface of the rock, all dark rich tones, something of the colour of porter or strong tea (brown pink, madder, Vandyke brown, and a little indigo); but when it springs out from rock, and air comes behind it, lighter. Colour of trunk of tree, rich burnt sienna or light red and Payne's gray; or on the bark, indigo and lake, with yellow ochre. Fortunate that it lies in a position to unite two masses of light so as to form one. Second large mass of rock richer in colour, brown madder and French blue; other masses much grayer (indigo and Indian red, Payne's gray and light red, black and yellow ochre, with little brown pink); whole mass of rocks relieved in light against quiet gray green trees in shadow; distant rocks and crags, cool gray with warm lights.—*Mem.* The whole mass of foreground brilliant without being crude; no violent contrasts of colour, no great appearance

of opposition,—such as purple and yellow, or blue and orange, or green and red,—yet quite effective."

As this work is of a practical nature, I venture to add one more description of the mode of proceeding with another rocky subject.

"*September*.—Sad rainy and stormy weather the last three days; this morning rather better, but large volumes of dark lówering clouds drifting over the mountains. All distance hidden; so determined to try and find a sheltered nook in the bed of the Conway once more. As I was likely to sketch only near objects, took Whatman's roughest paper well stretched, half imperial; found a good group of slate and other rocks in torrent, all the colours variations of the tertiary compounds and hues, and cool, with the exception of a gleam now and then on some warmer-coloured mass. After the outline, covered the whole paper with a full deep tone of indigo and Indian red, indigo and brown madder, or indigo and Vandyke brown, leaving the warm-coloured rock only in light. Repeated the wash, only this time leaving the sky and rock. The whole subject sure to be sober and gray after this, even the trees, grass, and fern; looks *too* dark. Put in all general shadows and tints; all decided in their form; no markings or smaller divisions yet; moss and vegetation all darker than rocks. Second sitting, same kind of day. Began by giving the form of the clouds, which were fine. Shadow of clouds deepest over middle portion of hanging woods; old oak on left hand relieved in rather warmer half light. Must not leave the stems of birch-trees in wood too light, or they will destroy the breadth. Glazed with transparent colours only,—raw sienna, Vandyke brown and indigo, brown madder and indigo, burnt sienna and Payne's gray, Indian yellow, burnt sienna, and indigo; where rather warmer, raw sienna and brown madder; brown pink and Vandyke brown over mossy parts. Rubbed out lights—getting granulation; toned over some of these lights with warmer colour—dipped rather dry brush in various colours, such as brown madder, yellow ochre, burnt sienna, &c.; dragged over the surface in the lights; by these means lights rendered more varied, opaque, and solid."

In concluding these notes on sketching from nature, the author must remark that, however useful the observations and remarks of uneducated people may be in reference to natural effects, or the general forms and colours of objects, the student must be cautious in following the advice of such persons in searching for good subjects or favourable points of view for the exercise of his art: they would undoubtedly lead him to the top of the highest hill in the neighbourhood, whence an extended view might be taken of the whole country, for it is the vulgar idea that the more that is seen, the

finer will be the picture; while, on the contrary, artists know that positions chosen in valleys, by the side of streams and roads, furnish better foregrounds and more variety of outline. It is related of one of our finest painters, that on reaching the Bay of Naples, instead of sketching the whole of that glorious scene, he (to the great chagrin of an amateur friend) sat quietly down and made a careful study of a fine mass of rock, with a figure or two in the foreground: while thus employed, he doubtless imbued his mind with the characteristic qualities of the whole scene. Amateurs are in general either incapable of judging what country is suitable for producing good pictures, or they do not take into consideration the peculiar capacity of the artist and the object he may have in view. The best advice for the beginner is to be obtained from some experienced artist friend, who, when he understands what is the object of the tour, the length of time allotted to it, and the kind of materials to be employed, will be qualified to judge of the mode in which they may be used to the greatest advantage. A little *vade-mecum* of tours for young landscape-artists might well be written by an experienced traveller and sketcher, giving a short account of tours, the nature of the studies to be found in each, and the easiest and most economical way of working them. In the absence of a guide of this kind, the author adds to these hints on sketching the names of a few favourable spots for study. For foregrounds and plants: Hampstead Heath, more particularly north end; the Brent at Hanwell; the banks of the Thames at Maidenhead, Staines, &c. For the study of trees: old oaks and beeches abound in Windsor Forest; old oaks, in Packington Park, Warwickshire; at Cobham, near Gravesend; beech at Knowle, near Sevenoaks; for polled beech, the Burnham Beeches, near Maidenhead, afford good studies. Fine specimens of Spanish chestnuts may be found at Norbury, Beechworth and Deepdeen Parks, near Dorking, and also in Greenwich Park; wych or mountain elm, in Cashiobury Park, near Watford; limes, in the same locality. Fine elms are scattered abundantly all over the country; which is also the case with the ash. Fishing-boats may be studied at Hastings, Yarmouth, and Brixham, south of Devonshire. For rocks and falling water, the student will find abundant examples at Hastings (sandstone), Cullercoats (sandstone), Marston (limestone), Lymouth, North Devon, Dartmouth, Dartmoor (chiefly granite); in North Wales, at Capel

Curig, Bettws-y-Coed, Dolgelly (chiefly slate), &c. But to find combined, rocks, bold headlands, distant mountains, and islands, in the greatest variety, the student should visit the west of Scotland, which affords abundant materials for endless study; taking care not to pass over too great an extent of country at one time, but rather setting himself down quietly for the season in one of the following places: Head of Loch Lomond, at Glen Falloch; Killin, Loch Tay; Dalmally, Loch Awe; Oban; Arran; Loch Fine; and, to conclude this list with the finest and wildest scenery in Great Britain, the Isle of Skye. By means of the steamers from Glasgow this extraordinary, wild, and magnificent island can now be easily reached; and the young artist, losing no time at Broadford, should pass immediately on to Sligachan inn, in Glen Sligachan, Loch Coruisk, and Loch Scavaig, where he will find all that an enthusiastic lover of wild and savage nature can desire.

Burnham Beeches.

SECTION IX.—PICTORIAL PHENOMENA OF NATURE, DESIGNATED BY ARTISTS "EFFECTS."

Spring.

MUCH of that refined pleasure experienced by all lovers of nature, and more particularly by landscape artists, when occupied in pursuit of the picturesque, is due to the constantly varying effects that are seen in nature. Beautiful under all changes, they may in a degree be compared to the display of feelings and emotions on the human face: but with this important difference, that the latter, when affected by some of the most striking of these, occasions pain, from the idea that they result from ill-regulated passions; whereas in the wide expanse of nature storms may rise and the wild elements be let loose, yet amid all this tumult and commotion the mind of the observer is sensible only of emotions of awe and sublimity, from his consciousness that all is controlled by a beneficent hand ever working for the general good.

The delineation of these evanescent *effects* will, with the like endeavour to represent human passions, always prove the greatest difficulty with which artists have to contend; so easy is it to "o'erstep the modesty of nature," so difficult to give *expression* without destroying grace and beauty. Still the attempt must be made; for where all is monotony, nature is but half

portrayed, the finer shades of feeling are wanting, all remains cold and deathlike.

To impress upon the student the vast importance of this portion of his study, a few observations will here be made upon some of the most important sources of the variations observable in nature. The sun alone, from his glorious rise in the east to his decline in the west, with his constantly changing elevation above the horizon, produces an unbounded range of effects. Influenced by this great power, the atmosphere, clouds and moisture, in numerous shapes, each afford an every-varying medium for presenting nature under different aspects; and when to these are added the variety of landscapes, seas, mountains, lakes, the wild common, or the woody dell, in all their diversities of colouring according with the season, there are, it must be confessed, inexhaustible sources for study and imitation.

In his first essays, when both mind and hand are occupied in acquiring the language of art, the student must make choice of the simplest combinations; a light in one direction, few objects and colours, and single reflections, the time of day being frequently the same in repeated studies: but the ambition of the matured artist induces him to seize the passing effects of nature in her happiest moods, visible perhaps but for a moment, yet remaining for years indelibly impressed upon the memory,—an enduring source of occupation and enjoyment, imparting to the pencil a touch all but magical in its action on the mind of the spectator.

When aiming at the representation of these transitory effects, the student will find the boldness and decision of hand acquired by the practice recommended in "Light and Shade" (Chapter III. Section IV.) of the greatest use, enabling him to seize upon the chief distinctions in tone, while apparently neglecting minor shades. No time must be lost in undecided tints or feeble touches; but the hues must be generalised in three or four distinct tints, and as much as possible effected with these, not trusting to any attractions gained by softening or finishing. Should the attention be distracted by minute details, in all probability the force of the effect would not be preserved. Great extremes or unusual appearances must be avoided until the student can give them without exaggeration; but all opportunities of studying the phenomena of nature should be embraced, as their truthful

representation gives great additional interest. As a general rule, in landscapes the hour of the day should be evident. To assist in showing this, we must summon to our aid a knowledge of the different conformation of clouds, as displayed at various periods of the day. Thus morning, either before or after sunrise, will be indicated as much by the form of the clouds as by their colour; or, if cloudless, by the appearance of dawn in the sky, by the summit of the hills alone being touched with light, or by mists lying in the valleys. Midday by the direction of shadows, reflections, or general expression of heat, calmness, and repose. In the evening, an exact chronometer is afforded in the height of the sun above the horizon, the beautiful and changing hue of the clouds, as day passing into twilight gives place to sombre night. The student must not shut up his sketch-book or relax his observations when the rain-cloud sweeps across the scene, many most charming effects being gained by watching its progress: the summer shower, passing in filmy veils over a portion only of the landscape; the rainbow, its companion, much or little displayed; the lowering cloud, the thunderstorm and lightning flash, the tempest,—all furnish the artist with valuable subjects for study.

In these phenomena, effects should be copied at the time, and the memory should not be trusted; otherwise mistakes may occur, which to the eye of any instructed person will appear simply ridiculous. A few notes, taken from Milner's *Gallery of Nature*, may remind the student of the principal points to be considered. "When rain is falling, and the sun is on the horizon, the rainbow appears a complete semicircle if the rain-cloud is sufficiently extensive to display it. Its extent diminishes as the solar altitude increases, because the coloured arch is a portion of a circle whose centre is a point in the sky directly opposite to the sun. Above the height of forty-five degrees the primary bow is invisible; and hence, in our climate, the rainbow is not seen in summer about the middle of the day. In peculiar positions, a complete circle may be beheld, as when the shower is on a mountain, and the spectator in a valley; or when viewed from the top of a lofty pinnacle, nearly the whole circumference may sometimes be embraced. When rain is abundant there is a secondary bow distinctly seen, produced by a double reflection. This is exterior to the primary one, and the inter-

vening space has been observed to be occupied by an arch of coloured light. The secondary bow differs from the other, in exhibiting the same series of colours in an inverted order. Thus the red is the uppermost colour in the interior bow, and the violet in the exterior. The same lovely spectacle may be seen when the solar splendour falls upon the spray of the cataract and the waves, the shower of an artificial fountain, and the dew upon the grass."

When rain has ceased, and sunshine succeeded, the effect produced by the passing shower may be shown by the freshness and glistering of the green leaves, the unusual reflection on the road, steam rising from rocks or places bare of verdure when the hot sun has burst forth, and, in addition, the more easily noticed incidents occasioned by rain, as the posture and grouping of cattle or figures that may have sought shelter from the sudden shower.

Sir Humphrey Davy's *Salmonia* also contains some remarks on the rainbow and the colour of clouds. He considers that when clouds are red, with a tint of purple in the west at sunset, the next day will be fine, because the air when dry refracts more red, or heat-making, rays; and as dry air is not perfectly transparent, they are again reflected in the horizon. A coppery or yellow sunset foretells rain; but as an indication of wet weather approaching, nothing is more certain than a halo round the moon, which is produced by the precipitated water; and the larger the circle, the nearer the clouds, and consequently the more ready to fall. In explanation also of the old proverb,—

> "A rainbow in the morning is the shepherd's warning;
> A rainbow at night is the shepherd's delight,"—

he informs us, "that a rainbow can only occur when the clouds containing or depositing the rain are opposite to the sun; and in the evening the rainbow is in the east, and in the morning in the west. And as our heavy rains in this climate are usually brought by the westerly wind, a rainbow in the west indicates that the bad weather is on the road, by the wind, to us; whereas the rainbow in the east proves that the rain in these clouds is passing from us."

Among effects not so common, but still pictorial in their appearance, the light of fire, and the contrast it offers to sunlight in colour, and the

direction from which it is generally thrown on clouds and surrounding objects, may be noticed. When the evening sun illumines the clouds with rosy tints, in consequence of its position in the distance, a portion of the under part of them only is illuminated; but a fire, as the sudden burning of a house or a rick, throws a warm glow all over the clouds immediately above it; and the introduction of such an effect, or of burning stubble or weeds, often gives much interest to the autumnal landscape: the smoke and steam rising in curling wreaths is more illuminated through its entire body than it would be under the sun's influence. Beautiful tints are often afforded by the morning or evening rays passing through the volumes of widely-diffused steam emitted by the railway engine; these are more broken, and have a more evanescent character, than the settled light on distant clouds. Fogs also, being mists greatly increased in density, are much altered in colour by the introduction of smoke and other matters; these frequently change the entire tone, and present a yellow or brown appearance, instead of a gray, neutral in its character.

Some little consideration is necessary to prevent the student from representing the phenomena of nature contrary to what they could possibly appear. With regard to the rays of light proceeding from the sun, we must recollect that these rays cannot be represented unless the sun itself is hidden by clouds, mountains, or other objects. If a cloud or mountain is shown at some distance from the sun, rays will commence from the cloud or mountain, radiating or diverging from the sun as a centre; and although the rays are parallel, according to the rules of perspective, they will appear to diverge as they approach the earth, and even those rays which are represented in a sunset as passing upwards are in reality coming down to the earth. From a certain position, however, rays may appear both to diverge and converge. Suppose, for instance, that in looking at the sun we see rays diverging as they approach us; on following their course as they pass us, they will appear to converge as they recede in the distance. In representing the perspective of clouds, the student must recollect that they are masses of vapour floating above the earth over a denser medium, and consequently their lower surface is flatter than the upper; in reality, the upper part of cumuli expands into convex and varied forms of very different

appearance: the more dense and opaque clouds are, the more light they will reflect, and the more shadow they will throw.

The effect of the rain-cloud is so varied, and assists so much in giving truth to the scenes depicted, that it may be further described. When seen in the distance on a moderately calm day, rain may descend in a delicate veil and parallel lines to the earth; or sloped by a gentle breeze, it may still further vary the forms. In mountainous countries, where rain most frequently occurs, and where, owing to the darkness of the tints behind, it is most conspicuous, the rain-cloud frequently affords an opportunity of veiling some form not desirable in the composition. In marine subjects, the dark storm-cloud contributes much to the sublimity and grandeur of the effect, even without the addition of the lightning-flash. If the lightning-flash be attempted, we should endeavour to give it that form and direction which those who have studied the subject say that it really presents; for its appearance is so momentary that, in fact, not merely the philosopher's science is needed, but some portion of the painter's license also: as in reality the landscape and the flash of lightning cannot be seen at one moment, the excess of light dazzling the eyes of the observer. Much discussion was raised some years since by a lightning-flash in Turner's picture of "Deal Harbour," which was curved and waved like a ribbon. Arago distinguishes three classes of lightning. First, luminous discharges, characterised by a long streak of light, very thin and well defined at the edges, of a white, violet, or purple hue, moving in a straight line, or deviating into a zigzag track, frequently dividing into two or more streams in striking terrestrial objects, but invariably proceeding from a single point. Secondly, he notices expanded flashes spreading over a vast surface without having any apparent depth, of a red, blue, or a violet colour, not so active as the former class, and generally confined to the edges of the clouds from which they appear to proceed. Thirdly, he mentions concentrated masses of light, termed globular lightning, which seem to occupy time, to endure for several seconds, and to have a progressive motion.

After clouds and rain, mists possess great interest, as, whether partial or general, they afford excellent opportunities to the landscape-artist to give aerial perspective with truth,—a point of equal importance with the linear.

By the assistance of mists, the great difficulty that the painter feels in representing distances may in some measure be overcome; by them lights and shadows are reduced, and minute details of masses lost, thus causing greater breadth, and adding to the size of mountains. In nature, dense mists, or the stratus clouds, frequently separate the summits of mountains from their bases. In depicting these phenomena, however, we must preserve so much of the outline or general tone of the mountain as shall enable us to connect the whole into one mass.

Mists are not so common in Switzerland as in England; and as there are also strong oppositions in the colour of snow, dark firs, blue mountains, and glaciers, subjects from that country require great care and skill in their treatment. In Plate 19, an incident by no means uncommon in that country has been introduced, representing an avalanche of snow falling over a gallery in the wild passes of the Stelvio. This is the most recently constructed military road over Monte Stelvio, and is the only means of communication which the Emperor of Austria has to connect his German and Italian states without violating the territory of another government. This road is very interesting, not only from its being the highest carriage-road in the world, but on account of the skill with which it is constructed, and the sublime scenery through which it passes. It is a singular and astonishing example of human labour. For a considerable distance half its width is covered in by strong wooden galleries, with roofs and supports sufficiently massive to resist the pressure of descending avalanches, which are very common here in winter. Immense masses of rock, in themselves mountains, throw out their black and scathed forms in striking contrast with the brightness of the glaciers which they separate. To produce the effect of snow, either when falling in detached flakes or in larger masses, as in this instance, it is advisable to prepare the drawing by washes and tints, getting in the general effect rather darker than it is wished to be when finished. To imitate the loose flakes, there is no better plan than scraping a razor over the surface, when the roughness of the paper allows it to take off the tint from the eminences; some of the light thus gained may be toned down, if necessary, with light washes. In falling snow, the larger portion of the flakes may be thus indicated; but those close at hand some-

times require either to be touched on with opaque white in separate spots, or sprinkled on by dragging the thumb-nail over a short-haired brush previously charged with white differing in degrees of opacity.

Snow, being a perfectly white surface, is admirably qualified to reflect hues and tints transmitted from other sources; thus the gray death-like hue of the summits of the Alps at sunset is changed for the most beautiful roseate tint immediately afterwards, and that again passes into a pale clear moonlight tone.

Landseer has frequently represented snow with much truth, both in quality and tone, showing the great degree of purity it possesses compared with other white objects, such as game with white fur or plumage, ptarmigans, &c. He has also represented the roseate hue it sometimes takes, contrasted with the reflected cool colour in the shadows, in his affecting picture of the dead deer and fawn; but in the representation of mountains covered at the summits with snow, Turner and Stanfield have best succeeded. A fine picture by the latter, of French soldiers passing a river near Sarzana, must be still fresh in the memory of most students. The young artist should not confuse the whiteness of snow in winter scenes with the light on objects; snow falls on the upper surfaces only, having often quite a contrary direction and effect, making, for instance, roofs of houses lighter instead of darker than the walls. Hoar frost and light falls of snow do not affect the forms of objects; but after heavy falls and drifting winds, the outlines are either rounded or altogether altered. The melting of the upper surface of snow, and its freezing again with a different reflective power, causes another striking alteration in its appearance; portions of the Jungfrau become by this change perfectly dazzling in their effect. If possible, the paper should be left pure and undisturbed to represent these highest lights; scraping out abrades the surface at the same time that it lowers it, whereas it should appear in relief. Sometimes a decided edge, or surface, can be given with Chinese white (oxide of zinc, which does not change in colour, if pure): it should be laid on solid and opaque; if not quite smooth, it may be scraped with a sharp razor, as a perfectly smooth surface is required to reflect the light equally. Snow soon loses its extreme purity. The sloping mounds of snow seen in the valley at the foot of the

Jungfrau from the Wengern Alp, appear much lower in tone than the course of the fresh avalanches; the latter resemble a broad white river flowing over a gray ground. When the student has an opportunity of examining pure snow, he should compare it in shadow, in diffused daylight, and in sunlight; he will then see how immensely superior sunlight is in power to even the whitest object.

The representation of ice is sometimes attempted in river scenes; it exhibits some of the properties of water, being a level surface still possessing some portion of reflective power; it is, however, grayer than water in colour, and when cracked shows more of a green or blue tint. The introduction of objects resting on the surface appears necessary to show its peculiar distinction and solidity from water. When seen in the form of glaciers, ice exhibits the greatest possible variety,—sometimes like waves of undulating surfaces, sometimes separated into pinnacles and spires as it falls over the uneven rocks beneath, and at other times at their terminations showing magnificent caverns and fissures, very beautiful in colour. The general hue of the surface, however, is much affected by the débris of the rocks which have fallen on it in its course, giving it a decidedly warm tint.

It is only when ice is clear and free from these deposits and snow that it can show much variation of hue; on such occasions, however, the colour of the sky, clouds, rocks, or mountains surrounding it, materially affect it. The ice of rivers varies in tint with the water, and the state it was in when frozen. The colour also of glaciers varies much. The glacier of Rosenlaui is noted for the purity and blueness of the ice.

ROCKS, DARTMOOR: RAIN, WITH SUN-GLEAM, PLATE XVI.

On the gray and weather-beaten granite rocks of Dartmoor, exceeding in elevation fifteen hundred feet, although still below the general height of clouds, their effect, combined with rain, is much more visible than in lower countries. Such high table-lands show the effect of exposure in many ways: in their colour having a hoariness and subdued coolness, but more particularly by their near contact with the clouds as they roll over and hide their highest tors, or sometimes veil altogether the brow of a moor; at other times

the sudden storm descends in torrents on the intervening valleys, accompanied with glimpses of brighter weather. At such times, both shepherd and sheep are alike glad to crouch beneath the old gray rocks or overhanging heathery bank, cheered with a partial but watery gleam of sunlight, giving some hopes of a termination of the shower. This is certainly not the weather for an artist's most elaborate studies; but with a quick eye and practised hand, he may, while joining in the welcome shelter take notes for his future guidance.

In commencing an effect of rain, such as is attempted in the Plate, the student should put a wash of pure gray over the whole subject, trying to blŏt in the effect as completely as he can at once, for on such damp days the paper dries very slowly; but still he must necessarily wait for it to dry before he is able to get the sharper lines of the falling rain and clouds, or the still firmer line of the hill-side. These first tones should be perfectly neutral, without any tendency to purple,—*cobalt blue* and *Indian red*, with *ivory black* or *light red*, and *ivory black* or *indigo*, *Indian red* and *yellow ochre*. After one or two of these general tones, the greens and other foreground colours will appear less positive; and yet in small portions of the foreground he can remove some of the gray with a drier brush or cloth. The blending of tints produced by working so much with gradated tones is very favourable to such effects, as it imitates very closely the natural result of falling rain, obscuring the forms and colours. It is advisable to use the colours full and flowing freely, as they have in this state more the effect of the wetted earth and glistening herbage. Rain, however general it may be in the western and mountainous parts of our island, is more picturesque when shown in partial showers: in this condition the artist finds it a useful incident in veiling or altering the form or tone of mountains otherwise heavy; for while it conceals some of the parts, it may cause others, like the jutting crag or near shoulder of a mountain, to separate into much finer forms. (We have in recollection the difficulty we found in bringing Ben Cruchan well into a sketch of Kilchurn Castle, Loch Awe, without the assistance of a welcome shower.) When we see a dark lowering cloud commencing to fall in rain, the descending drops will cause the part from which it is falling to be grayer and lighter than the other parts, but still it will appear like a

dark veil on the sky or lighter clouds behind; but when coming before a still darker object, such as a mountain under shadow of a heavy cloud, it will be lighter again. Something like this may be noticed even in towns, by watching the large rain-drops or snow-flakes as they descend; looking up, they relieve dark against the sky, but against the darker houses they appear light.

Sometimes a light shower may be seen falling from a cloud, but be entirely dissipated before reaching the earth; and not always falling perpendicularly, but sloped by the direction of the wind. Heavy rain does not obscure the distance so much as either mists, fogs, or steam. Steam is particularly dense, and casts a positive and intense shadow: one can observe how completely it shuts out light and distance by standing at a railway-station in heavy rain, and watching the steam of a departing train fill the nearest arch; the whole appears a dense opaque curtain, while the rain-drops in comparison are no impediment to vision. Thus mountains and distances should be shown when the rain is general, although many miles distant.

We may quote Mr. Twining on this subject: "The effects which are subsequent to a fall of rain are in general picturesque and agreeable. The soft transparency of the atmosphere; the bright green of the meadows; the freshness of the vegetation in general; the sparkling of the returning sunbeam on the moistened surface of the leaves, and in the large drops which they still throw off at every motion; the steam rising from the previously heated roofs; the contrasts between the dazzling reflections of the moistened roads and the dark appearance of the trunks of trees, and other objects of wood, soaked with moisture,—are effects either pleasing in themselves, or obtaining that deeper interest which results from apposite associations, or from the most explicit and pointed comments on the condition of the weather."

ON THE DART, TWILIGHT, PLATE XX.

After the profusion of colour and endless variety of hues which are to be seen at sunset, the sober tints of twilight may appear monotonous; still they frequently possess a harmony of the most refined character, comprising indeed fewer notes, and in a lower key than when the sun was displaying his glories as he sank below the horizon, but possessing abundance of tones

of great variety and power. The cool shadows of night may be creeping up to possess the scene, but they are softened and even warmed by the reflection of lights still lingering in the sky and on the clouds. With regard to the general tones of evening, philosophers as well as artists consider that the tones of morning are generally grayer or cooler than those of evening; this will not, however, prevent the artist from delineating morning effects as sometimes warm, or, on the contrary, some evening effects as sometimes cool. To account for the general tendency, we quote Professor Müller, who says that "immediately after the maximum diurnal temperature has been attained before sunset, the surface of the earth and strata of the air at different heights begin to lose heat by radiation. Before, however, this has led to the entire condensation of the aqueous vapour, it passes through that transition stage which causes the evening red. In the morning the case is different; the vapours which, in the reversion of the process, would probably have given rise to the red, do not rise till they have been exposed sufficiently long to the sun's action." In twilight, such as Plate 20, the evening grays are supposed to be increased by clouds. We have therefore to begin the drawing by blotting-in grays made with *Indian red, rose* or *purple madder* and *cobalt*, strengthened by other washes, in which *indigo* and *ivory black* are combined with *French blue* and *madder;* and in such effects the quiet predominating tones are secured by putting in grays over the whole drawing, with the exception of the small portions of the sky where the warm sunset-light still lingers: this prevents the stronger tones afterwards used from approaching the glowing colour of sunset. In suggesting studies of like character from nature, Plate 20 will, we believe, be found useful.

MOONLIGHT, PLATE XXI.

Moonlight possesses great charms for all lovers of nature. Objects seen by it seem separated from the more common light and influence of every-day life, and subject to different laws, as if they belonged to another world. But still the laws of nature must be studied and faithfully observed by the artist who would convey this effect to his pictures, or only so much deviation from them permitted as may be considered as a slight exaggera-

tion, tending to produce a result on the eye of the spectator more in accordance with the appearance of nature than would follow from an exact copy. The illuminating power of the moon is very small in comparison with that of the sun, some hundred thousand times less; but we are hardly aware how small until we see the moon in fair daylight near a bright cloud, and compare its brilliancy with that of the latter: we then find we can hardly distinguish it from the cloud, for it reflects no more light, and sometimes much less, from an equal extent of surface. It is only by some such examination and comparison of the real power of moonlight, that we can arrive at a just conclusion upon this point. Again, the size of the moon as compared with the field of view we take in when sketching a subject, or with the objects in the picture, is far smaller than we usually suppose. A man at about twenty-five yards from us would hide the whole of a full moon with his head alone; but although these considerations are true and worthy of remembrance, they are not to confine students to any exact proportionate size; for we are aware that to give objects importance, they frequently may be represented large in relation to the other parts of the picture. In a picture of 60° visual angle the moon can truly occupy only about the one hundred and twentieth part of its width; when, therefore, we represent it large, we must consider the extent of the picture as diminished, and the objects as necessarily near at hand.

In daylight views, if we can avoid introducing the sun into the picture, we shall possess greater power for the other lights, as all lighted parts ought to have but a small portion of the force of the illuminating body.

When the moon is in the picture the same point must be considered, and care taken that the planes or surfaces of objects facing us are not in light. When the moon is behind us, and consequently out of the picture, we shall have the strongest possible light on objects; and when it is on either side, and rather behind us, an opportunity is presented of giving the strongest lights and cast shadows together.

When the sun is represented within or at all near the visual angle, it is scarcely necessary to observe that the full moon cannot be shown; also, when the new moon is shown, it must have the illuminated crescent turned towards the sun; with the latter below the horizon, the crescent would be

turned in the same direction. These points would almost appear trivial and unnecessary; but we continually see the crescent of the new moon represented as turned away from the setting sun. With regard to the degree that the character or texture of objects ought to be shown, we may remark, that in bright moonlight we can see to read print, and the colours of objects near at hand are slightly visible; grass will appear of a subdued olive-green, and the colour of warm stone will be shown in a deep and cool maroon, or as warm gray.

With respect to the tones and hues of moonlight subjects, it is not advisable to begin with washes too cool, or the whole effect will be black; for when all parts are equally dark there is a loss of power. The drawing, therefore, should be commenced with a wash of *Indian yellow*, or a mixture of that colour and *Indian red;* the second tint may be *Indian red* and *indigo*, or *sepia* and *indigo*, with a little *crimson lake*. *French blue* may also be used instead of *indigo; cobalt* scarcely possesses power enough to be of much service. The tones of buildings seen by this light may be made with *sepia, brown madder*, or *purple madder*, combined with *French blue* or *indigo; Vandyke brown* and *indigo*, with a little *lake*, form a good tone for objects in shadow, also *purple* or *brown madder* with *indigo;* and the green of trees or grass with *brown pink* and *indigo*, with *crimson lake* or *purple madder*. But notwithstanding our anxiety to preserve light in our picture, we must not forget that if a moonlight view is hung by the side of a sunset, it should at once show that it is *moonlight;* it must be inferior by many degrees in brilliancy and in warmth of colouring.

SECTION X.—FIGURES AND ANIMALS.

THERE are but few scenes in nature, however beautiful they may be, upon which the eye can rest with continued pleasure unless they exhibit some signs of animated life; consequently few landscapes are complete without the introduction of figures or animals—some objects in human form, or animals intimately connected with them—whereby to enlist our sympathies in behalf of the scene before us; moreover, they furnish us with a scale by which we can judge of the extent of the view, and the size of every other object it may contain. Again, the costume, if rural figures, will indicate the country in which the sketch was taken, for most countries show some peculiarities in the dress of the peasantry; by their occupation we can also give some idea of the hour of the day, or the season of the year; and taking advantage of the license universally conceded to the painter, we can, by introducing incidents, no matter how trivial in themselves, give to the sketch an air of truthfulness and reality, imbuing with interest the most barren and deserted spot, and lending a charm to the quiet and rustic nook.

In addition to these important points, rustic figures offer almost the only opportunities for the display of the primitive colours; in their dresses

will be found the strongest colours, which, harmoniously united and judiciously contrasted, afford a point of strong attraction for the eye to rest on,—a focus of great strength, having a powerful influence on all the other hues of the picture, causing at the same time the foreground to advance, and the distance to retire.

It is, however, a mistake to suppose that, even in these prominent portions of a picture, colour must always appear in its full force; on the contrary, we must still bear in mind that, neither in the strongest light nor in the greatest dark, does it appear as positive as we know it to be in moderate daylight. When we offend this law, and represent a red coat or blue dress of the same pure tone both in the lights and shadows, how childish and ridiculous does it appear; while, on the other hand, if the colour is once indicated with sufficient purity in those parts, namely, the half lights and shadows, where it would be so seen in nature, nothing more is required.

It has been observed in more than one instance in this short treatise, that colour, however strong, gives place to light and shade; this it is that produces the important quality of breadth observed in nature. To imitate this successfully, we must study with care how the light will fall on the figures we introduce into our landscapes. If they are important, in the foreground, and are to attract the eye, we may find it advisable to arrange the colours of the garments so that they may present considerable masses of hues without any great division: the dresses of women and children especially give opportunities of placing colours and tones in harmonious arrangement; and while thus pleasing the eye by beauty of contrast, they serve to draw our attention to the chief point of interest, or, if sufficiently important, they may be themselves the greatest point of attraction. To give greater contrast, we should avail ourselves of the darker clothing of men and boys; so that in all these groups variety may be given, and yet a general breadth secured. Perhaps there is no portion of a figure, however powerful the colour of the dress, which is so instantly distinguished by the eye as that left uncovered, showing the rich-toned flesh. This is probably owing to its being quite different from the tones of the landscape, or to its union with forms that we at once recognise; we are therefore always anxious to introduce as much of the bare legs and feet as we may without making the figures

look cold; to prevent this, we must bear in mind that they should be coloured with warmth and be full in the outline.

Although we are thus attracted by the colour of flesh, the distance from which figures are viewed in a landscape prevents the landscape-artist from marking the features very minutely. He divides the face into broad masses of light and shade; the lesser differences in either portion being but little regarded. If the figures, however, are near, and in strong sunlight, the reflected light on the face may cause the whole to have a rich and warm effect.

If it is desirable to have the whole of a figure in light, the colours should be so selected that they bear more relation to light than shade, and thus do not interfere with the breadth. The material of which dresses are made has more influence on the masses of light and shade than would at first be thought possible. Thick woollen homespun garments, made and dyed by the peasantry, generally harmonise better than others, their very thickness causing them to form larger folds, thus giving greater breadth, while their rough and varied texture is more easily imitated than those finer in quality. From their durability, they acquire different tints as their colours fade; and this generally occurring on the prominent parts, greatly assists the delineation of light and shade. One cause of the great want of picturesque beauty about Manchester and large manufacturing towns is the poor thin cotton dresses, covered with the smartest colours, displayed in sprigs or spots all over the dress, while whole-coloured garments are equally rare. These spotted or gaudy-coloured dresses remind us that in arranging subdivisions of colour we must still bear in view the necessity of breadth. For example, a figure in a scarlet or orange-red jacket or cloak will have all the vigorous attractive qualities of positive colour without destroying the light, because this kind of red, broken with yellow, is more allied to light than to shade. Yellow also, in a modified condition, can be used; it diminishes the quantity of light even less than red, but does not possess the same positive character as a colour. When employed pure, it is apt to look gaudy and rank; a small quantity, such as a bonnet or a handkerchief affords, is sometimes desirable; but it is more generally agreeable when introduced in a subdued condition in one of the secondary hues, as orange green or citrine.

Blue is subject to the same remarks. A large mass of it destroys the effect of warmth, which is so agreeable in a picture and so essential in figures. A cold shivering figure, whether the feeling is produced by coolness either in the flesh tones or the dress, has a bad and painful effect. Those blues composed of indigo, broken in the light by a little yellow or red, and forming dull citrine or faded greenish tones, and contrasted in the shadow by purples and reddish browns, are most pleasing. Rich brown tones also made with madder and sepia, or Vandyke brown and lake, cooled in the shadows with blue, are very agreeable to the eye.

When several colours are introduced, they may with care be so arranged that they shall present harmony by analogy and simultaneous contrast at the same time; thus two figures may be so clothed, one having the upper part green the lower a dull red, the other a broken purple and orange yellow. It will be scarcely necessary to add, that these divisions are not to be formal, terminating exactly at the precise line like diagrams of pure colour, but must be broken or mellowed into each other by strong lights which take away the colour, by shadows which subdue it, and by reflections which considerably modify the tones. All should be done with the most refined art, and yet the art itself should not be visible.

When it is desirable to direct the attention more particularly to one figure, it can be effected by giving it greater contrast, not only in light and shade, but by using such colours as shall produce simultaneous contrast. The face also being *turned* to the spectator causes additional interest. Thus also, in Plate 22, the red dress of the girl on horseback is rendered still more conspicuous by the opposition of the green colour of the boy's coat; the man is at the same time placed in shadow, having the contrast of light and shade, but deprived of violent contrasts of colours, as they are all mellowed and broken. In all the colours which are observed in nature on figures, there will be some modification produced by simultaneous contrast and by aerial perspective. This effect must be imitated either by laying on the general tone first, or by passing one transparent tone over another: thus all the primitive colours, including white and black, must be harmonised, or they will look crude, the pigments being rarely put on quite pure; black especially looks heavy and unnatural when so used, and we ought to make

LEIGHTON, BROTHERS.

PLATE 22.

CONTRASTS OF COLOUR.

this colour exceedingly valuable by using it seldom. In the sketch of two children crossing a rustic bridge (page 252), an instance is given where the necessity to seize the position or attitude at the moment it strikes you is evident. The children could not be taken to the bridge and told to call the dog, throw down their gleanings, and arrange themselves naturally; but being caught, as it were, in an instant by the artist's eye, they are much more likely to appear simple and unaffected. General breadths or masses may be put on all over the picture, the shadows added, and, if sharp vivid lights are wanted, it is sometimes better to put them in with a firm brush and solid Chinese white; and when this is dry and hard, glaze over it with the requisite colour at once. This produces great force.

The study of rustic figures must always present difficulties to the artist: if he is strongly attached to landscape, he grudges the time or interruption it appears to cause in his principal study; he frequently allows figures which are passing by to escape his pencil, and when he is afterwards painting his picture, he wants these very figures to complete it. Let him therefore not hesitate to drop his landscape study when he encounters such incidents; but if his picture is not in a fit state to receive them, take out his small note-book, and sketch at least the attitudes, and make notes of the colours. These notes will serve to guide him in making a finished study, if he can procure the figures to sit or stand for him at a future time. It is useless for an artist to say, "Now, to-day I will study figures," because many of the best and most appropriate incidents or figures may not be found at the moment: nor does he always succeed in finding upon the spot a complete group suitable to his picture; he may meet with figures scattered at intervals over the subject, in such situations that, were he to introduce them in this way without thought or system, he would divide the interest and destroy the effect of unity. For instance, if he finds at one moment a figure like the girl on horseback (Plate 22), the boy might not be there, or the accessories, such as baskets, panniers, &c., not so picturesque as may be seen in another instance; but the constant habit of filling the note-book with studies of this kind wherever they are to be found, will enable the painter to enrich his finished picture with the most appropriate details.

If three or four figures are introduced of the same size, it is better to

unite them in one group; when, by varying the attitudes or positions, an agreeable connexion or union of sentiment and action throughout the whole will be produced. It is desirable to decide, when the group first strikes the eye or the imagination, which figure or figures shall be predominant, in order not only that the forms should be the most important, but also that the colours of the dresses should be so chosen or arranged, if they are not fortunate in nature, that they may assist in giving force and beauty to the group.

If the landscape is nearly completed, and it is still doubtful where the figure or group ought to be placed, the artist may cover with his hand the spot where he thinks it likely it should be, and by the force of imagination suppose it there: he can then judge how it would be situated with regard to other objects; so that he may avoid placing interest under interest, or object over object. Should his imaginative powers not suffice to embody the effect of colours and contrasts, he can easily blot them on a small piece of paper, and placing that over the spot, try the effect. Although it is advisable to have one group or incident predominant both in form and colour, that does not prevent the introduction of a figure, or even groups, of less importance in the distance; the brilliant colours of the principal group, on the contrary, often gain by being repeated in a moderated or lesser degree in the other figures or groups.

The size of figures to be drawn in landscapes has often proved a source of doubt to the student: generally speaking they should be small, for they must not divide the interest with the scene, but only add to it; they are, in fact, accessories: if too large, the landscape becomes subservient to them; both cannot be equally attractive: Very often the actual space figures occupy in a landscape is exceedingly small; but they derive much of their importance from their motion. This power they possess in common with certain other portions of the landscape, such as clouds, water, smoke, &c.; but when we add to this motion the idea of life, the sentiment of interest is so much increased, that the smallest spot of colour passing rapidly along has power to attract the eye or absorb the whole attention: thus the flash of colour produced by a kingfisher along a solitary stream, the gray heron in his silent flight, or even a fluttering butterfly, become of importance; and

to possess that in the picture, they must be drawn larger and brighter than they really are. Another instance of the effect of motion in determining objects when they are either exceedingly small in the distance, or when their colours are the same as the objects around them, may be mentioned: a stationary figure may be taken for a rock or the stump of a tree; but when seen in motion, the eye is instantly riveted on it, and figures which appear as mere specks can thus be traced in their progress up the mountain-passes. To give the full importance either to the forms or colours of figures introduced, we must be careful as to placing strong forms or colours of the same hue or power about them; and we may still further assist this distinction by taking care that neither their forms, their colours, nor the manner or touch with which they are made out, should repeat the inanimate portion of the landscape surrounding them.

Good drawing and decision in outline is even more essential in rustic figures than in the landscape; at any rate, inaccuracy is more easily detected, for all are by nature and unobserved training constituted judges of the truth and correctness of the human figure. It is well, therefore, for all who introduce figures into their landscapes to study the proportions and anatomy of the human form previously. This may be done with great facility in London and all the large towns at the present time, where there are many works of great ability which will assist the student; and he may rest assured that the time will not be lost in the employment, for it enlarges the ideas, and greatly contributes to form a good style. A few hints may, however, be given to the landscape-student here, which, in the absence of these opportunities, may assist him in sketching the rustic figures he meets with in his rambles. They should always be introduced appropriately; they should be naturally employed, connected with the scene, and not divide or distract the interest, but add to it. Their actions, positions, &c., should be seized at once, and put down, that the spirit may not be lost; the truthfulness thus given to the merest sketch is surprising. To effect this with rapidity, the decision and correctness which has been gained by copying geometrical figures of lines, angles, and forms, in different positions and quantities, will be very useful. A certain firmness or squareness of line or form, which results from drawing from point to point in straight lines,

begets firmness or largeness of style in sketching the figure. This mode of viewing every thing in large masses, without subdivision, is seen in all the best painters, and is applicable to works of any class or school; it prevents timidity or meanness in the execution, and should not be confounded with caricature, which is an exaggeration of peculiarities. If the figure be upright and equally balanced on the feet, a horizontal line or a mark should be put where the feet are to come, this being very important, as indicating the distance it is from the base of the picture; then a mark for the top of the head, this gives the height; a perpendicular line is now made, and comes of course, in the case mentioned, between the feet; but if the figure is standing more on one foot than another, this line will be in the middle of the foot upon which it is standing, or rather between the two points. If the figure is in action, as walking, running, or carrying anything of weight, the proportion of the body on each side of the line will vary: in the case of progression the body is, of course, thrown forward; and it will at once be perceived that the leg must be advanced, or the figure would fall. A rustic figure may be considered as about seven heads high; a child, having the head larger in proportion, may be about five. A line across the shoulders will next assist the student most, as by it he may give the action as well as proportion. If the action of the figure throws it considerably out of the upright, a line should be struck, which may be supposed to indicate the spine; then lines to denote the direction or position of the arms and legs. It may seem strange, but it is the custom of most landscape-painters who only sketch the figure generally and rapidly to put in the head after the trunk and a portion of the limbs, thus taking the most effective lines while they are visible. In drawing the head, the oval of the face, the frontal line which goes down the centre of the brows, nose, lips, and chin, and which curves with the direction of the face, the lines through the eyes, nostrils, and mouth, all agreeing and curved either up or down according to the position of the head, are the first drawn; and, aided by the general direction these give, the features are blocked out. The hands and feet are treated in the same way—the large masses first, and the subdivisions afterwards; but care should be taken to go over the whole, marking all the delicate variations of line, for it is highly important for the student to possess a good outline

before he begins colouring. If the study of the figures is large, the outline should be rubbed faint, and put in with the brush and sepia or brown madder, marking in some indications of the light and shade. The principal shadows of the face and figure are now put in; and these should be made with *Vandyke brown* as a foundation, warmed with *brown madder* or cooled with *cobalt*, according as the transparency of the blood tells or not; and when dry, the flesh tint may be added in a wash of delicate *Indian yellow* and *Venetian red*, or *burnt sienna;* or to get greater brilliancy, *cadmium* and *carmine*, broken down with *burnt sienna* and *cobalt* for a greenish neutral shadow, and *Venetian red* and *cobalt* for a reddish neutral. If dark in complexion, *Indian yellow* and *Indian red* or *brown madder*, or *Vandyke brown, sepia*, or *brown madder*, with *cobalt blue* for the shadows, always recollecting that shadows appear warmer than their edges; where in fact light passes into shadow, there will appear gray, for on rounded forms the union of the lights and shades produces a neutral gray, and changes the warmer local colour at these parts into gray, the reflected lights in shadows being the warmest. The most difficult part of figure-painting is the demi-tint, the tones of which are most delicate and shifting; the sweetest colour of the figure lies in these tones. The simultaneous contrast from the brilliant light flesh tells much on them. The flesh tint of the male figure being orange pink, generally presents purply tones; in the female a pink orange, they incline to green. Much of the beauty of these tints will be obtained by hatching warm tones over the first general washes; by this process transparency is given, and we appear to penetrate the shadow. If this hatching should be too conspicuous, it may be subdued by a brush and clear water. All this minute description of tints and shadows will be more needed by those who study the rustic figure in large than by landscape-painters in general, who, painting a face the size of a lady's finger-nail, will very probably blot it in with burnt sienna or light red, and scarcely even trouble themselves to furnish it with eyes.

A few words may be added on cattle and animals, which contribute such a charm to landscape-scenery. With figures they form most pleasing groups, and give great interest to the simplest subjects. In them we possess opportunities of showing colour in a purer state than in the landscape, and

thus use them to give point and contrast to the whole picture. The colours of cattle are generally rich and dark ; but we now and then find a white or cream-coloured cow or horse of great use in introducing light into the foreground. Horses, when rustic and rather shaggy in their coats, are well suited to some kinds of landscapes, such as forest or heath scenes ; even dogs become of importance in connexion with sheep or highland drovers. The rich colours on cattle or animals can generally be best obtained by glazing one pigment over another. If light, *yellow ochre*, or *yellow ochre* and *light red*, or *burnt sienna*, or *Indian yellow* and *brown madder ;* if dark, they may be made with *burnt sienna* and *brown madder*, or *Indian yellow* and *purple madder*, or *brown madder* and *sepia*, or *Vandyke brown* and *purple madder*, or *Vandyke brown* and *crimson lake*. Even when black, no black pigment must be used, but colours should be united or glazed over each other to produce a purply black, or blue, or brown black effect; thus *indigo* and *purple madder*, *French Blue* and *Vandyke brown*, or *sepia*, or *purple madder* glazed with *indigo* or *French blue:* these giving all the depth that is necessary without opacity, and produce a good effect.

Kenilworth Common.

ADDENDA.

The following additional notes are in answer to the questions of a young art-student friend:

By "license conceded to the painter with regard to the introduction of figures" previously mentioned, is meant that he has the right to place any figure or incidents that he may have encountered and sketched at one time into a landscape studied at another, provided that they are suitable and appropriate to the scene and time. For example, in the Highlands, we may very likely meet just as many cockneys, dressed in short-tailed coats, glossy hats, gloves, and well-blacked boots, as we do of old weather-beaten shepherds, with their gray plaids and caps: the colour and smartness of costume, with their actions and attitudes, at once indicate them to be accidental visitors, neither contributing to the effect nor associating with our ideas of the scene. The fashion of their clothing in particular, being discordant, should be rejected, it being permitted to omit such even if they should be landed in shoals from some Loch-Lomond steamer; but we rejoice in the appearance of an old shepherd or gamekeeper, with rough-coated gray pony, pouches, game, and traps, as associated with the country, and serving to give a focus to our sentiments. However, there are occasions when the very inappropriateness of the figures in a landscape contributes to enhance the effect: thus, in the midst of peace and solitude, an indication of a coming storm, or result of past violence. This gives such great interest to Landseer's "Challenge." The deep repose and calm of the moonlight, in which the bellowing monarch stands, with the certainty of the terrific combat that comes with his swimming rival, adds character to the scene, and makes it almost a historical work. The same may be said of "The Sanctuary;" which has a certain amount of action in the uplifting stag and startled wild-fowl, but a grand effect of calmness and security in the deepening shades of twilight settling over the distant lake and hills, thus throwing a veil of obscurity over the hunted deer. Whoever has spent a single autumn in the western Highlands must feel that this is true to nature, and yet elevated by the painter's imaginative art. But to indicate in some degree the bounds that should be placed on this license, let us suppose a less experienced artist, seeing the attractive nature of the incident of the wild-fowl rising startled from the reeds in "The Sanctuary," had introduced them in the "Challenge;" the result would have been, the intense interest now concentrated in the stag and his coming rival would be divided, and the main point of the picture lost, in order to show how well the laborious artist could paint ducks, or with what variety of objects he could enrich his picture, forgetting that in art, as in other studies, small things must give place to large. Again, Stanfield's "Abandoned," undoubtedly one of the finest pictures he has ever painted, owes much of its poetry and sentiment to the idea of the former struggle, contrasting so artistically with the helpless deserted state of the noble ship. Stanfield never got this idea from models, though he has some of the finest; but from intimate acquaintance with the strength and beauty of the ocean. He might

possibly have painted this wreck as she lay on the sands, or even at Rotherhithe; the clouds and waves he may have studied from his window at Hastings; but by skilfully uniting the cause with the event, he has given poetry and feeling to the wild waste of waters that only a master in his art could have done. This is what may be called "license," or just imaginative combination, which those who rest too much on model copying (living or dead) think objectionable. In these pictures, then, the eye and mind tend to focus their powers on some one point of main interest, to which every other thing in sight is subordinate and accessory. The more definite this object appears, the more indefinite should be the surroundings; and when any scene about us happens to supply this condition in a striking degree, we invariably have a picture. Turner, however, was our greatest master in the handling of this principle of bringing interest and focus into a picture; nearly all his works show how keenly he felt the necessity of this scale of piano and forte. We can often observe the point or pivot on which his compositions turn, as it were, upon a main focus of incident: very often a mountain top, or the reflection of a mountain-summit in a lake; again spreading through gradations of minor incident, as rocks, buildings, shipping, figure-masses; then subsiding into a final tranquillity of water or sky. Thus, in the busiest scenes or pictures, there must be repose as well as action; or, if you prefer the terms, tranquillity and incident,—the former generally greatly predominating. The want of this quality of repose is more evident than agreeable in many modern works: it may come from the horror a young artist has for "canvas to let" not feeling, perhaps, that the pure and beautiful gradations of a clear evening sky are quite as pictorial, when justly contrasted, as multiplicity of form. Once more, on the introduction of incident into landscape for it is a very difficult point with all, and not merely amateurs or young students. There may be occasions when the very inappropriateness of figures or other incidents in a scene will contribute to enhance the desired effect: in this way the power of each quality is increased. Wallis's beautiful and effective picture of "Chatterton" was rendered more striking by his showing the calm break of day: the candle quietly burning out, and the gay dress even, so significative of the wild fancies, ambitious illusions, and deceptive temperament of the poor boy, might or not have been true to life; but doubtless they assist the story: yet Chatterton might have died with the shutters closed, or in the night, and without even a candle. This is license, and universally conceded to painter as well as poet. Again, in the wild seclusion of the snowy summits of the Alps, to find a poor chamois bleeding to death from the ball of the hunter, while the innocent fawn hangs in anxious attitude over its parent,—this is harsh and jarring to the feelings; yet we know it is true, and may occur, it is therefore not objectionable in art. The passage of the Great St. Bernard by Napoleon, or the combat between the French and Russians at the Devil's Bridge, St. Gothard, are also incidents that you would hardly call appropriate; yet they may, when skilfully introduced, contribute to the grandeur or horror of the scene: the character

of the historical event being preserved, but the landscape still continuing predominant. When speaking of the passage of the Alps, the mind instantly recalls the great picture of Napoleon on his rearing charger by David, and the more recent rival picture by Delaroche, who has placed him in meditating attitude on a mule, and led by a guide. We feel at once that artistic license has been exceeded in the former, but in the latter all is truthful and appropriate; and the more we read or know of Napoleon, the more we feel that, with his practical mind, he did positively cross the Alps in this more unaffected way. Thus the realisation of grand natural facts is the poetry of landscape.

WITH REGARD TO THE USE OF BLUE AS THE PRINCIPAL COLOUR OF FIGURES.

It will be seen from what has been already said, that I do not consider indigo, when broken with yellow or red, as a real blue, and objectionable. On the contrary, I consider the colour thus broken one of the most agreeable and common in peasants and fishermen's garments, appearing in this case to contrast most artistically with red, and also passing into orange or even yellow without any harshness. The blue that is objectionable is the cold Waterloo blue, or a true primitive, which, as ladies declare, quarrels with nearly everything but a tawny complexion. Now, with regard to Gainsborough's "Blue Boy," brought so prominently forward in the Manchester Exhibition, 1857, my opinion, after a careful examination, is, that Gainsborough has shown his talent as a portrait-painter more than he has controverted Sir Joshua's theory. There is blue, no doubt, quite enough,—skilfully managed too; blue on the coat, breeches, stockings, shoes, and bows; blue in light, and blue in shade: but, after all, the main charm and beauty of the work is the rich, ruddy, and lifelike face of the young fellow; and the eye and imagination dwell on that as a solid piece of flesh and blood, not at all cold or disagreeable. The question is, whether the very coldness of his costume does not send you to his beaming face and roguish eyes at once as the prime source of interest; besides, the whole picture is painted with such vigorous and powerful handling, and the blue is set-off with such fine rich russet tones of sky and landscape, that the effect of blue as a cool colour is counteracted: yet if one looks at the breeches and stockings, one doubts whether there is any particular harmony or reason that *they* should have been blue. Were he less ruddy, I suspect he would remind us of the poor urchins we see coming out of some indigo manufactory. But turn to Sir Thomas Lawrence's "Young Lambton," in the next room: you perhaps do not know or recollect that *he* also was originally dressed in blue, and had a very different appearance; for his small delicate face and pale complexion had such a miserable effect, that he was entirely re-clothed in rich crimson-velvet before he was exhibited. Depend upon it, those who attempt Gainsborough's experiment will need all his power; and how few possess his talent, we may see in the successful rivalry with Sir Joshua which he shows in his portrait of the charming Mrs. Graham, exhibited by the side of this bold youth.

With respect to contrasts in costume, what I have said is certainly very short: but the theory is treated more at length in "Simultaneous Contrasts;" besides, every one who has studied one season from nature, or even in Langham Chambers, knows that there are a hundred different ways of giving contrasts. For instance, repose in position against action, strength and abruptness against delicacy and refinement in form as well as in colour. Light delicate complexions are thus constantly opposed to dark; until, following the example of Sir George Beaumont, who asked Constable where he would put his brown tree, we might demand, "Where do you intend to place your brown beauty?"

ONCE MORE ON THE MEANS OF STUDYING THE FIGURES IN LANDSCAPE.

Artists should never allow themselves to weary of the study of real life, and the incidents that express life and action. It is so much easier to allow our attention and energies to relax and fall back to the quiet placidity of model-drawing, that we do well to remind one another that the real position of the human figure, the real expression of the passions of the human mind, are only seen for a moment when the exciting cause is effective. They are not seen at all either in the face or limbs of the placed model, skilful though he be, and you yourself have often remarked how soon the model droops and distorts; neither are they seen on the stage, trained though the actors are to stereotype a substitute. Every one can tell a copy of a stage-scene in a moment. How is this? Because it is unnatural. But when one sees real action, the result of intense feeling, how it dwells on the memory! I have seen most of the best actors of the last thirty years; not one of their personifications of the passions remains on my mind so distinctly as that of a poor woman, whose child was run over in one of the back streets of St. Giles's. I even recollect her attitude and the wringing of her hands, an expression of grief I had never before observed. I had thought it was a twisting of the hands closed together, whereas the poor creature passed one hand over the back of the other alternately, ending with a strong compression of the fingers. I believe this action is spontaneous and natural; as the other day, when taking my children to the Zoological Gardens, some person threw stones at the hippopotamus, to make him come out of his bath; when he immediately rushed out, and burst open-jawed against the fence, trying to break it down. My little boy called out, "O, what shall I do? what shall I do?" and began to wring his hands in the same way. So, I say, observe nature first; get ideas from her; then work the model, nude and draped, as much as you like: but keep always in sight the reality, not the made-up attitude or expression; and however much you may study parts, never let them interfere with the truth of the whole. Again, you recollect that group of ragged men, women, and children, that I told you of, digging and clutching up the broken wood-pavement in Holborn; they, in their eagerness, attitudes, and grouping, would have formed a far more natural foundation to begin upon, for your picture of the "Ben-

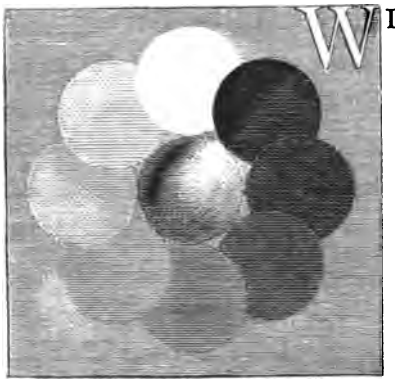
digo Diggings," than all your models with their true costume and implements. There was more reality, more heart, more lifelike attitudes in this real scene than your models could screw into their faces or muscles in weeks. Therefore I say again, Take care of the real action and incidents first; and in the search for these I think you do quite right to move about and take sketches from real events, making your first studies and pictures from them.

I must now tell you why, in nine cases out of ten, the model is resorted to for study, rather than the real incident or attitude as it occurs. Firstly, because the true energetic expression is so transitory, so evanescent we may say, that none but expert artists are qualified or prepared to seize it. Secondly, because the study from the model is a lazy way, allowing more time for dawdling drawing, and making excellence in the minor points of finish and colouring compensate for real vitality. This study may be more gratifying to the eye than either the real draped figure or the antique; but I am inclined to agree with those who think that Etty was not a good example, nor showed a pure and refined taste and love of art for its own sake, in always repeating studies from the nude. When Gilchrist praises him for never being absent from the life-study at the Royal Academy, although scarcely able to bear the heated rooms and the great changes of air on his asthmatic frame, I have thought whether Michael Angelo went through all this, or whether good drawing of the bones and dissected muscles, with a careful study of the antique, and afterwards the real life out of doors, as we intend to introduce it in our pictures, was not in most cases sufficient; for it is not necessary for all to excel in painting naked figures or exquisite flesh tones. Etty might not be aware of the feeling to which he largely contributed; and this mode of study must have warped his aim in art. There is more or less refinement even in drawing from the female life; and you must have noticed this as you have seen Mulready's careful studies, formerly shown in the Society-of-Arts' rooms, and since in the Art-Treasures. You must have admired his refined and yet truthful studies; they are far removed from the reproach which may apply to Etty's: for the same reason I prefer Bailey's conception of Eve to Dubuffe's, and Bell's nymphs to Pradier's bacchantes. What is copied so carefully from these models must partake of the character of the originals, who possess nothing of the feeling of the incident or event; and this deficiency will be very visible in the work. This was very different in the time of the ancients, or even in the present time in parts of India and Africa, where it is the custom for the people to go nearly unclothed. Place one of these women by the side of a London or Parisian model, and see the difference there will be in attitude and expression. It is for the same reasons that I consider the restorations of the Venus de Medici bad in taste, and prefer the statue in a mutilated state. Therefore, when in modern sculpture, a brazen sort of indelicacy is presented, it offends me artistically, and makes me see the great difference between the best old Greek marbles and such modern works.

With regard to the size of figures in landscapes,—a most important point, and one which apparently gives you great anxiety,—I venture to remark, although there is much in art that cannot give an account of all it feels or does, if you were a figure-painter as Wilkie, Collins, Mulready, &c., you would draw in your figures, and suit your landscape, the smaller portion, to them. If, again, you were a landscape-painter, like Turner for instance, you would knock about your figures like bits of wood or colour, just to make them suit your purpose, or heighten the effect. So you see the education and previous study of an artist will generally determine for him which part of his picture he should make the focus of interest; it is only in certain cases, when an artist is of the bat species, hovering between landscape and figures, that he feels any difficulty. Look at Hook's pictures: he can paint figures and landscapes equally well; but I much doubt whether his pictures possess only one focus or predominating point, like Webster in figures or Linnell in landscapes. Many have remarked that they would gladly mystify some of his exquisitely-finished middle distances in order to throw the focus of attention more on his figures. You say Cuyp always sacrifices his landscape distances and skies to his cows, having breadth and repose in one portion of his picture, and strength and opposition in the other; also you instance Rubens' landscapes as being truly landscapes, although he could paint the figure so well; so that probably he felt the necessity of putting some control upon his powers. I view it thus, when the figures are to be the chief interest of the picture, then the landscape should be broad and tolerably undefined; but when, on the contrary, the scene as a landscape predominates, then the figures should be just the size to serve as a scale and set it off; and your observation that when a group of passengers in a street are sufficiently distant to allow a clear space of pavement and road to be shown first to the eye, gives a very good idea of the proportion they should hold. But if they are too large, or approach too near, then the street-scene as a picture vanishes, or the eye does for you what you must do for your picture,—unfocus the one and focus the other.

You say that "it is never contended by the most strenuous advocate for continued atelier-study that this can supersede the observance of real nature." I believe not; but I maintain that those who pass some of their best hours, and give their best labour every day, to one kind of study, will at last see nothing but what arrives to them through that medium, and will eventually become disgusted with the crudeness, abruptness, or want of grace in natural attitudes; and will so carry their mode of study about with them, that even their most rustic peasants shall be formed and posed like Junos or Dianas: and this is what was formerly remarked of Christal's Welsh lassies, beautiful as they were; but what is worse, they may lack some of the comparative innocence and freshness of rustic life. I prefer placing the model out of doors in the same light, even sunlight if possible, if the effect in the picture is to be sun-lighted. Light transmitted through glass, and reflections from various objects in the atelier, must materially affect the tones of the figure.

SECTION XI.—CONTRASTS OF COLOUR.



WITH a view of affording the student as much assistance as possible in the present work with the smallest amount of labour on his part, the subject of colour, in its application to landscape-painting, has been treated in the most simple manner, avoiding all those short and technical expressions in which artists indulge for the sake of brevity, but which are little understood except by those in constant communication with them. The author trusts that this mode of proceeding, aided by numerous diagrams and examples, will now have so far removed the difficulties obstructing the onward course of the student, that, having acquired a due knowledge of the nature of the materials employed, and an efficient dexterity in handling them, he will have leisure to search into the causes of the extraordinary and beautiful effects of the contrasts of colour seen in nature, and to trace the sources from which they arise; and that, in transferring them to his paper, he will not only be able to imitate them with accuracy, but also to apply his representative pigments in strict conformity with the laws governing the relation of colours with each other.

A mere faithful copyist of nature may, no doubt, succeed in producing a perfectly correct representation of the various modifications of colour in a natural scene; but to accomplish this he must use his brush from beginning to end in the immediate presence of the effect to be conveyed; his first wash and his last glazing must each be applied in exact imitation of the actual landscape; and when, after laying aside his work from fatigue or other interruptions, he resumes his study, he will require that every minutiæ of atmospheric appearance, light, &c., should be identical with that of the previous day; because, from alterations of the light and many other causes, he will find the effect and tints will have changed, tending to confuse and

mingle those delicate variations of colour on the exact representation of which his complete success depends; even as a slight movement of objects submitted to the photographic process suffices to destroy the truthfulness of the picture.

Frequent study from nature, attended with all these precautions, is most valuable, and cannot be too highly recommended to the beginner as the best training to which he can subject himself, and indeed as the only school in which the attainment of perfection is possible: but it is evident that, if no education either of the eye or the mind accompanies such study, the student must remain a mere servile imitator; and when the combinations or contrasts of nature are no longer before his eyes, he will be utterly destitute of the power of adding a tint or a wash in accordance with the principles of harmony. Happily, however, this is seldom or never the case: the mind examines, combines, and arranges by a process of its own, even when not cognisant of the laws already acknowledged; though this, in the majority of instances, is attended with needless labour and expenditure of time.

To prevent this groping, as it were, in the dark, and to bring the experience of other minds to assist the student in reducing his crude impressions into order, some attempts are here made to explain the rules regulating the production of one colour on the eye by the action of its opposite, and the different power of contrasts produced by colours of various degrees of intensity.

We have referred before to the instance of that part of a yellow sand-bank seen in bright light, tending to produce an appearance of purple on the parts left in shadow, and to like occurrences: these effects being well ascertained facts, it is evident that education may teach where such oppositions would take place in nature; and hence, under what circumstances the artist must avail himself of them in his representations, when, as is frequently the case, he has to supply from memory the inevitable deficiencies of his sketches. We say *inevitable;* for few indeed would be the number of works produced if, as in the studies above alluded to, every touch had to be applied within actual view of the scene under representation: on the contrary, the greater part of most landscapes is painted under the influence of

a vivid recollection, when the mind, being fully imbued with the nature of the effect to be produced, is guided by known rules in applying colours of such a nature and in such proportions as to give a corresponding effect to the picture.

The term recollection must not be confounded with imagination: the latter, in sketching from nature, is of course inadmissible; the practised eye retains the full impression of the scene on which it has dwelt, bearing in mind the various parts making up the whole; and the hand accustomed to the use of the brush, and directed by the judgment in the selection of suitable colours, conveys to the drawing the impress of truth by painting from the image still vividly present to the mind's eye, though no longer visible to the physical organs.

It is not every artist who can give a reason for his almost invariably using certain colours in connexion, or in juxtaposition with certain other colours; his knowledge may have been imbibed almost imperceptibly to himself from a careful and constant observation of nature, and may often seem to have come intuitively. But the amateur, who is not supposed to devote his time and energy so entirely to the one object of succeeding in art, will do well to take advantage of every aid to diminish his labour; he should study the laws proved by observation to govern the effect of all colours or tints in relation with those appearing near them.

Notwithstanding, however, the encouragement the student receives from the feeling of power that knowledge of this kind will convey, he must regard it as merely the rudiments of a universal language which will enable him to read, and in some measure to understand, the principles that govern these natural effects.

Having by these preliminary studies obtained some definite idea of colours, and become acquainted with their appearance, whether in the pure, in the simply mixed, or the complex condition, as shown in the primary, secondary, and tertiary colours (Plate 3); and having acquired the power of recognising them when seen under the influence of different kinds of light and shade,—the student must now be prepared to examine them and their effects on each other, either in juxtaposition or when contrasted in every possible degree of purity, variety, and quantity; for on his intimate know-

ledge of contrasts or oppositions will depend the beauty, harmony, and force of his pictures.

Should he possess an attentive and observing mind as well as a quick and sensitive eye, he will from the commencement have perceived that colours gain or lose in a very great degree, according to the situation in which they are placed with regard to others; and that in some cases their real hue can scarcely be recognised. Consequently the success of his practice will ultimately rest upon his thorough knowledge of those oppositions and contrasts which exert the greatest influence on each other, whether the effect is produced by repetition, by simultaneous, or by consecutive appearance; he must also become aware of the degree of sensitiveness possessed by his own sight, and thus be prevented from diverging into irregularities which would result from a want of such important knowledge.

By contrast, colours either gain or lose in the power which they exercise on the eye. To examine this effect, we must take them in their simplest form, and even in the first instance confine ourselves to white and black, the representatives of light and shade.

When these are placed side by side, as in Plate 23, Fig. 1, we find that each is rendered more powerful: such a contrast has been called simultaneous, because each colour acts at the same time upon the other. The alterations and modifications are indeed so extensive and so important, that it is here necessary to consider some of them more carefully, although they have been mentioned in the Section on "Light and Shade." The most important point is, the effect this juxtaposition has on the apparent strength of the tone, more especially at the point of contact. When we examine several narrow shadows of different degrees of intensity, but which we are aware are each quite flat, or take several strips of paper of the same neutral gray, but of different depth of colour, and place them side by side, the middle of each shadow or strip will not be altered, but the edge next the lighter tint will appear darker, and that in contact with the darker tint lighter; thus producing an effect of concavity in each, while the whole will resemble a fluted column, with the light more on one side than the other. If so great a modification takes place in flat shadows, or in neutral gray tones, how great must be the alteration in the appearance or relative value of colours

with the additional effect of the complementary colours produced by their contrast in juxtaposition!

The next description of contrast claiming our attention is the successive: this refers to the complementary, or accidental, colours which appear when the eye has been fatigued by regarding colours in a strong light, and has been spoken of in Chapter I. Section III. It should be clearly understood that these colours are not only visible to philosophers, or to those whose eyes have been trained to observe colour, but are easily seen by all who will take the trouble to observe the effect that takes place in the eye when pressed in the dark, or when closed after looking either at the sun or at a strong colour in sunlight. To make this more evident to the student, it will be advisable to place before him a diagram in the form of a circle, showing the principal colours with their complementaries. In this circle (Fig. 1) the three primitives are separated by the secondaries, which they form by mixture, or by being placed over each other: thus the complementary of red will be green, that of blue orange, and that of yellow violet or purple. If the primitive colours pass into the secondaries by gradations, their complementary colours will be subject to as many modifications as there are in the original colours. To render this balance of colour still more intelligible, the three primitives with the three secondaries have also been disposed in an equilateral triangle in Fig. 2, which clearly shows that the complementary colour of a primitive is composed of the secondary colours formed by a mixture of the two remaining primitives: thus green, a mixture of blue and yellow, is complimentary to red; violet or purple, made with red and blue, is complimentary to yellow; and orange, made with red and yellow, is complementary to blue. In whatever form these

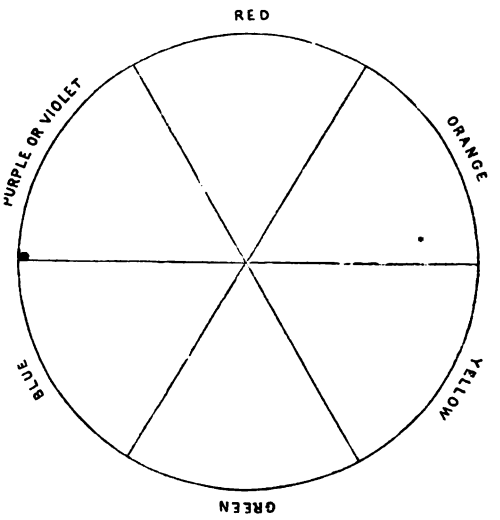


Fig. 1.

contrasts are considered, the student must endeavour to attain a clear idea of colours and their complementaries.

In order to enable the student to prove by actual experiment that complementary colours do become visible to every one, with rare exceptions, four of the most striking simultaneous contrasts are shown in Plates 24 and 25. These diagrams, although small, produce great effect on the eye; they can also easily be copied, and the experiments enlarged or varied, by cutting out figures of the same proportions in gray paper, and pasting them on tinted grounds two feet square. It may be necessary to observe, that, after looking on a figure or wafer of any strong colour, whether primary or secondary, the complementary colour will always appear surrounding it, even when it is placed on white paper; but in this case the quantity of light reflected by the white ground will cause the appearance of the complementary colour to be indistinct, and therefore it is better to use a gray of a neutral character for the reception of the complementary colours; and the ground colour should be extended, that it may have a more powerful effect on the eye, while the figure should be narrow, so that the complementary colour should affect the whole of its surface. These experiments may be made in sunlight, common diffused daylight, or lamplight. To some persons they are obvious at one time, and by one kind of light; to others they become more quickly visible in light of a contrary description. The author finds the ground colours produce the effect described soonest when they are slowly moved about from side to side, or up and down, and the quantity of light upon them varied. Only one diagram should be seen at one time, the other on the same sheet remaining hidden by the blank paper divided for that purpose.

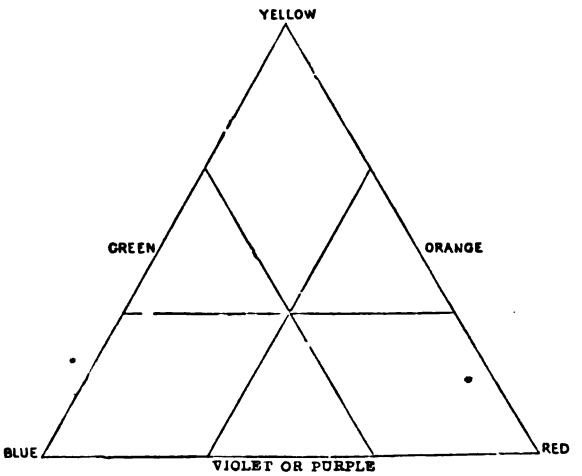


Fig. 2.

YELLOW CAUSES THE GRAY TO APPEAR VIOLET.

BLUE CAUSES THE GRAY TO APPEAR ORANGE.

YELLOW CAUSES THE GRAY TO APPEAR VIOLET.

BLUE CAUSES THE GRAY TO APPEAR ORANGE.

It would be as well, in experimenting upon these contrasts in large, to place one of the figures cut out of the same gray paper on a ground of white, that it may be used as a reference, and the real colour of the figure may be seen. In the accompanying plates the neutral gray is exactly the same in each diagram, being printed with the same colour. In Plate 24, Fig. 1, the ground colour is yellow; the neutral gray will in this case appear violet or purple. In Fig. 2, the blue ground will cause the gray to appear a golden orange, although the tone of the gray on the figure in some degree deducts from the distinctness of the complementary colour. In Plate 25, Fig. 1, the ground being orange, the figure appears blue; and in Fig. 2, the ground being green, the figure appears red. When these experiments are tried on a large scale, the complementary colours will appear strongest round the edge of the figure; and it has rather a spectral appearance, the colour approaching in some degree those beautiful tints seen in the prismatic spectrum.

Carrying out the results of these experiments in our practice with regard to the colours or tints of flesh when examined closely, we shall doubtless find that many of the most beautiful and delicate of the tones on the human face are referable to the effect of simultaneous contrasts: thus at the edge of shadows on a skin of warm rosy colour is observed a cool gray, and sometimes even a cool greenish tint, these becoming more particularly visible when the surface is rounded like the face. Where the light passes into half light, or where the light and shade meet, there will be these cool tones; and if the complexion is red, they will, from the complementary action, have a tendency to green, however unnatural such a tint may be considered on the face. If the complexion incline to yellow, or orange rather, the edge of the shadow will incline to blue. Some portion also of these peculiar gray tints may be owing to the semi-transparent nature of the skin, as well as the degree of gloss on its smooth surface, which reflects the cool lights of the sky. When these slightly green or gray edges of shadows are put in, they must be decided in their form and position, and pure in tone, or they will lose all effect. If dirty or undecided, it is almost needless to add they are worse than useless.

It is a most improving study to examine a skilfully painted panorama

close at hand, where we may see these simultaneous contrasts carried into effect in a bold style and on a large scale. In these works of art every colour must be true and forcible, and rather exaggerated, to allow for the blending of the hues by aerial perspective, as well as the operation of contrasts; so that here we have excellent opportunities for observing their importance. Many of these pictures are so skilfully dashed in, and the oppositions of colours arranged with so much art, that one regrets when they are destroyed—as they generally are—to make room for others of fresher interest.

These chief contrasts once understood, it will be easy to comprehend the more complex combination produced by the eye when, after looking at a certain colour, and acquiring an aptitude to see its complement at the same time with a new colour, the sensation produced on the eye is not a simple one, but the result of this new colour and the complementary of the first. Both are for the moment added, as it were, together. Much of that harmony of colours so admirable in nature must be the result of this principle, which not only blends them together by the laws of light strictly appertaining to themselves, but also, by the exquisite sensibility of the visual organs, still further harmonises them to the sight of each observer. Thus a distant line of gray mountains, seen from a road-side, with a foreground of cool forest green, would appear tinted with crimson; if the foreground is a rich yellow meadow, or bright sandy beach, the distance would be tinted with violet; and if seen over the surface of a blue sea or lake, it would take a decided orange tone. In a country like England, in which green tones so largely predominate, we cannot observe these striking effects so frequently as we could wish; but when we see mountains bare of all verdure, and rocks of different hues,—such as are to be seen in going up the Sound of Sleat, on the west coast of Scotland,—and look at them across a blue expanse of water, we at once recognise the wonderful and mysterious effect of the complementary colours. If these are seen with the added glories of an autumn sunset, it will readily be confessed that there is little necessity for the landscape-artist to travel to Italy for the purpose of studying colour.

The difference of power existing in different individuals, in respect to the full appreciation of all these delicate variations of colour, has been spoken of

in Chapter I. Section IV. Assuming, therefore, that all who have proceeded thus far in this study possess good and sensitive organs, we will at once pass on to the explanation of the effect produced on the eye by any colour when viewed singly or in the simplest opposition, such as black against white, when such contrasts are supported by the neutral gray described in Chap. I. Section I., being a mixture of powdered charcoal and white chalk. A tint of this kind, possessing those rare qualities of neutrality which allow it to combine with all the rest, whether in harmony or in contrast, gives important aid in the appreciation of these effects, increasing the brilliancy of some and subduing the harshness of others. Owing to these properties, it has been used as a ground to set off and enhance the colours in Plates 3, 4, and 23.

After looking some time at a colour, the retina becomes fatigued, and in some degree incapable of seeing it as it is. In order to regain its normal state, it must either rest or look at the compensating colour.

In contrasts, therefore, we gain the greatest power by bringing the extremes together, not only as regards their relative force in chiaroscuro, but also as concerns the juxtaposition of colours with their compensating equivalents. At the same time it must be borne in mind, that a continual recurrence to such extremes would fatigue the eye as much as a monotonous sameness, and that, in nature, these extremes are rare and of limited extent. As an instance of the fatigue alluded to, and of a temporary loss of power by the eye, M. Chevreul shows that when a person has twelve or fourteen pieces of red cloth to examine, the first six or seven will appear more brilliant than the last; and that to regain the full power of discrimination, it will be necessary to look at the complementary colour—green, when the remaining pieces will appear of their true brilliancy. To bring this more home to the landscape-student, let him call to mind the satisfaction that the eye feels when, after wandering over greens of various tones, it at last meets with a brilliant spot of red or scarlet. This is so well known, that it has almost become proverbial that no green lane is without its old woman in a red cloak.

After acquiring clear ideas on this point, we must study what effect the contrast of different colours, varying in degrees of intensity, has either in enhancing or diminishing the power of each; when it will soon be perceived that the union of the qualities of light and shade with those of colour pro-

duces the strongest effect: thus light-toned yellows contrast powerfully with deep-toned purples, and light-toned greens with deep-toned reds or maroons. If the colours placed near each other are complementary, additional power is gained by the effect of the complementary action.

To examine carefully the effect simple opposition of colour produces, we should turn to Plate 3, Fig. 1, in which the three primitives are arranged so as to form the secondaries where they cross: in this situation they at once assert their importance, the secondaries appearing far below them in force; but in Fig. 2, the secondaries assume the same importance in comparison with the tertiaries. The orange in Fig. 1 looks dull when seen with the yellow; but in Fig. 2, the same colour printed at the same time looks brilliant when contrasted with the quieter-toned tertiaries: it has also in this diagram the additional contrast of the complementary action in reference to the green, a red orange being complementary to a green blue.

To show the effect of contrasts more clearly to the student, Plate 23, consisting of rude blots of colours, has been prepared; to which we will briefly allude, leaving the pupil to make experiments from which he may draw inferences for himself.

In *Example* 1, white is contrasted with black; the simplest of all contrasts, but open to abundant variations by the power of diluting the black so as to form a gray. The beautiful effects we see in fine engravings or in photographic pictures, are produced by a combination of neutral tones. Again, in nature we often see white in large quantities in the sky, or on buildings, without being struck with its power; but let a white horse or cow appear in the foreground, where it is contrasted with the deeper tones of colour, and at once we understand the value of the contrast.

Example 2. Yellow is here contrasted with white and black. All the primitive colours gain more or less by their juxtaposition with white and black; and although in these blots of colour no attention has been paid to quantities, or any great care taken with the varieties of tone, it will at once be perceived that yellow contrasts more powerfully with black than white. Yellow abounds in nature in broken or modified tones more than perhaps any other colour, but it is difficult to introduce in a pure state into any work of art without producing gaudiness.

Example 3. Red in light pure tones, dappled in with white, is very harmonious; and the effect, when observed in a clear and varying complexion, is well known: it is more nearly allied to white than to black, and presents this peculiarity, that objects may possess much positive colour as red, and yet not detract in any great degree from the light.

In *Example* 4, blue is seen to be very harmonious when contrasted with white; the sky presents frequent occasions for observing such effects when dappled by the cirri, or bright white clouds. It is, however, necessary to observe some caution in introducing it in pictures, as it partakes largely of a cold character, and is more nearly allied to shade than light.

Example 5. A light green harmonises well with white: in this example it is contrasted with the complementary colour red, which adds much power. This contrast is the most decided, and at the same time the most pleasing, in nature. Both colours hold the middle position with regard to light and shade; in addition to this, red, the most positive of the primary, is contrasted with green, the most perfect of the secondary colours.

Example 6 displays orange in conjunction with blue, and is set off by the addition of a little white and black.

Black has nearly the same power of enhancing the light colours as white, but it is by contrast rather than by bringing them to a focus; it also increases by analogy the effect of the darker. With this view, it has been retained in the plate more frequently associated with the dark than with the light colours. These experiments are followed in Figs. 7, 8, and 9 by contrasts of white and black with the secondary colours; and in Figs. 10, 11, and 12 by their contrast with the tertiary hues. The student, in making experiments of this kind for himself, should bear in mind the remark in Chapter I. Section II., namely, that only small quantities of pure colours are found in nature; therefore the proportion of the tertiary colours ought to be greatly increased beyond that which they exhibit in the three last figures. In landscape, with the exception of a portion of blue in the sky, the dresses of rustic figures present almost the only opportunities for the use of pure colours; and these being generally small in extent, more frequently serve as a focus of colour than constitute a prevailing tone.

If we wish to produce a quiet harmonious effect, it will be necessary to

pay attention to the harmony of analogy, and so pass, by almost imperceptible steps, from one colour or tone to another. The pure pigments employed and represented in Plate 4 afford abundant opportunities of arriving at this result; for as none of them are true colours, or to be considered as types of the primitive colours, we can, in order to produce the desired change of tone, allow ourselves great latitude in their use, without resorting to the constant mixture of other pigments,—a practice which always tends to produce a muddiness, and to destroy that clearness so desirable to be maintained throughout every picture. Various pigments are now properly employed to represent the same colour in nature under different lights or effects, and therefore it is unnecessary to resort to the obsolete custom of putting in the general effect with neutral gray—although artists still retain the use of washes of delicate and varied grays over the sky, distances, and middle parts of the picture, as they conduce to aerial qualities; but the effect of light and shade is left to be put in with pigments possessing greater variety of colour and more removed from black, as there is so great a choice from which to select, that not only the extremes of colour, but light and shade, can be reached by a gradated scale, the whole being in perfect harmony, unattended by that loss of light occasioned by the former practice.

But in order to receive the full benefit of this extension of our materials, it is essential to avoid confusion, or want of appreciation of the different qualities possessed by pigments. The student, therefore, should classify them according to the primaries to which they are most nearly related: the simplest manner possible is the best. Plate 4 shows some of them arranged in a gradated scale; but those who would become intimately acquainted with their qualities will take each in turn, and try effects by mixing it with others of a contrary nature. Powers and tendencies are thus brought out that are often very surprising. These experiments should be made on separate sheets of paper, accompanied with written notes, and the most successful mixtures selected; they would do more to advance the student in colouring than the most careful copying of elaborate drawings. In these trials yellow, and all broken colours in which it predominates, should be mixed with the different blues, when greens of various qualities will be the result; the purest yellow and blue producing of course the most perfect green; some of the other greens

nevertheless being the most useful to the landscape-artist. Among the qualities brought to the student's notice, will be the relative degrees of transparency or opacity in the different pigments employed: for instance, by the mixture with blue, it will be observed that Vandyke brown and sepia differ considerably; although they are sometimes confused in the mind, Vandyke brown having more yellow in its composition, and consequently producing a greener hue. Again, brown madder, a useful pigment, but with undefined name when mixed with the blues, will be shown in reality to belong to red rather than yellow, as its name would indicate, and consequently the mixed tint will be gray or purple. Black will also be found to produce a greenish tint with all yellows, thus indicating its affinity to blue. This methodising is besides advantageous in giving students some idea of the relative force of different pigments, indicating those most suitable to the distance and foreground.

Should the student wish to give a more vigorous effect, and yet preserve the harmony of his picture, he must consider colours as they appear under different influences. The harmony resulting from a predominating coloured light has already been treated of in Chapter I. Section III. This result is, indeed, so universal, that colours are rarely seen of their true tone: thus, under the warm glowing light of the setting sun, green may become crimson, brown may turn yellow, and blue, with the addition of the yellow rays, will become green; so that in introducing such a light, the greatest care must be taken that every part of the picture may come under its influence, otherwise violent contrasts, opposed to the truth of nature, will inevitably be produced.

But whether the student essays to produce an harmonious effect by analogy of colour, or by contrasts of complementary colours, or even by joining the two capabilities in the same picture, one thing is certain—he must have *breadth*,—the same kind of breadth and simplicity in colour that has hitherto been his aim in chiaroscuro. Neither the cold nor the warm colours can be subdivided or scattered about his picture; they must either be gradated and mellowed by each other, or else so judiciously contrasted as to combine in producing a concentrated effect in the proper place.

It does not follow that any exact proportions either of warm or of cold

colours can be assigned as producing harmony; if it were so, all pictures would be alike, and artists would become mannerists: a certain degree of choice is not only allowed, but desirable, provided that the artist is always true to nature. In the study of the colouring of nature, we must recollect that we see colours during the execution of the picture in very small portions at a time, and under very limited effects; whereas in nature our vision roams over a large expanse of colours, broken into variations of the tertiary hues by the effect of the light, air, and the reflection of the cool grays and bluish tints of the clouds and sky. To imitate this reduction of the force, we must guard ourselves against the introduction of harsh or crude colours, and rather reduce in strength the colours we employ, reserving for our points of greatest interest the contrast of the purer colours, when they have in consequence a very powerful effect. The Dutch masters afford some excellent examples of this art; and Reynolds has particularly pointed out this school as the best in which the young artist could study the management of his colours. In gazing on a beautiful sunset, we never see *that* out of harmony; but when we are putting on our crude pigments, forgetful perhaps of the light which dominates, we are apt to offend against the principles of nature. In Plate 26, some arrangements of colour are shown by rough blots, without pretending to any correctness in drawing, quantities, or even exactness in tone; and notwithstanding the difficulty of representing such rough blots in printing, they will serve to explain the principle under consideration. In Fig. 1, the warm colours are massed together in a simple way,—the yellow and blue small in quantity, the red large and contrasted with its complementary colour green. Fig. 2 might represent a group of fruit, flowers, &c.; a large mass of warm colours, gradated in some degree from white passing into cold, which is repeated in a slight form in the sky. In Fig. 3, the warm colours are kept on the figure; the brightest and most advancing about the head, where they are contrasted with white and black. The whole mass is surrounded by cooler tones, which are brought to a focus on the jug. In Fig. 4, the arrangement of colours is reversed, the cool being kept in a mass in the centre, surrounded by warmer tones of different degrees of intensity. In both these modes of using colours,—namely, that of producing harmony by placing them, slightly varied, side by side, and that of contrasting some

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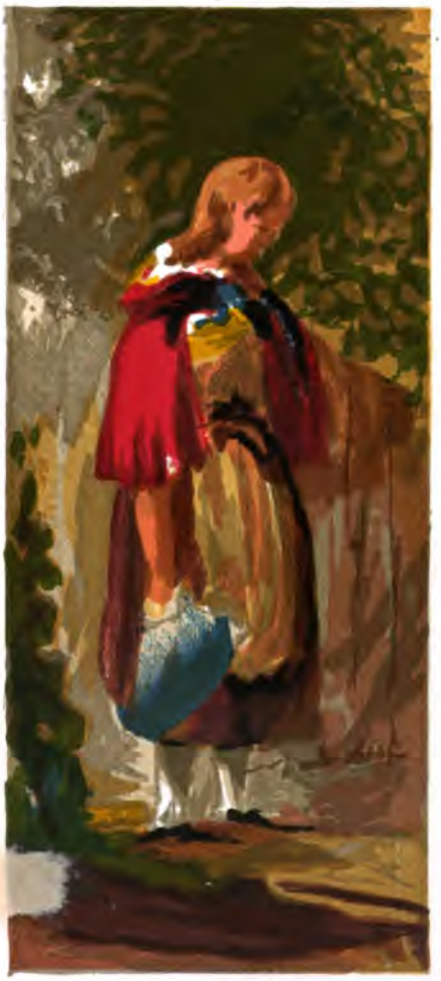

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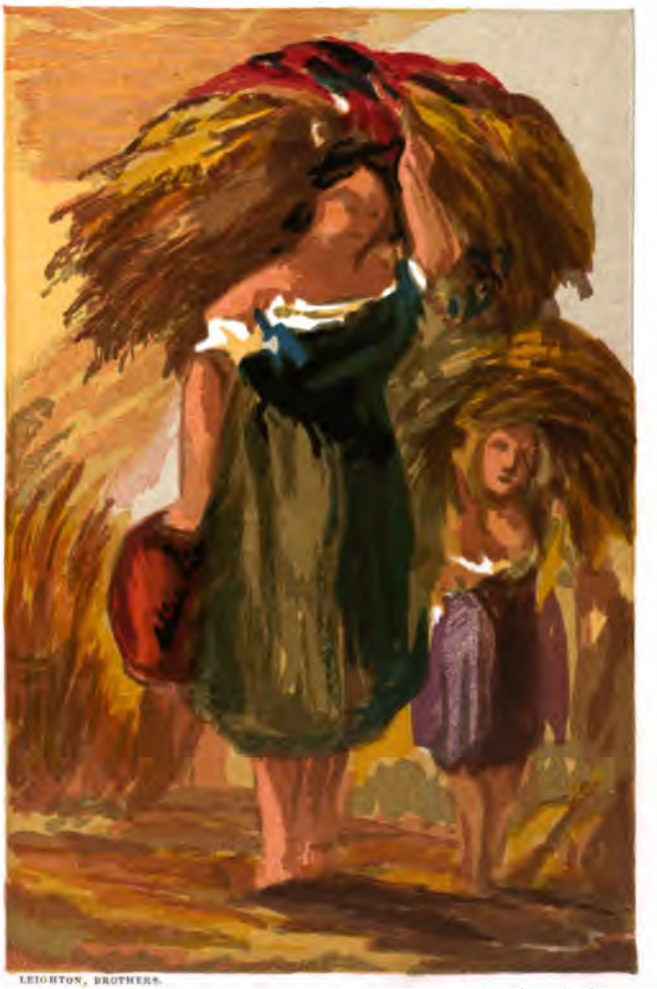


LEIGHTON, BROTHERS.

PLATE 26.

ARRANGEMENTS OF COLOUR.

U. OF MICH.

of them with others known to increase their power in consequence of the complementary action,—attention must be paid to the preservation of breadth; avoiding, however, insipidity and dullness on the one hand, or crudeness and vulgarity on the other. One important point ought to be noticed, namely, that if the harmony resulting from blending or floating various pigments into each other be employed, it is only necessary to preserve the general purity of tone; but if the effect is to be gained by simultaneous contrast, the colours must be extremely pure, and well considered in reference to the scale of contrasts. They will then increase in power as they approach one another; but if they are allowed to mingle or float over each other, the effect will be lost: thus, if red and green are pure and in contact, a brilliant effect will be obtained; whereas if they are mixed, nothing but a dull heavy green will be the result. In studying the effect of simultaneous contrasts, it is better to err at first on the side of crudeness, and trust to the influence of a more practised eye for refinement of the tones; if the principle is right, this will come afterwards.

Attentive study of contrasts will also teach the pupil to look for them in nature on a wider scale, and cause him to be less anxious to paint objects entirely of that colour which he knows them to be: for example, on referring to Chapter I. Section III., he will find that he has been told that the natural or local colour of any object is entirely subservient to sunlight, and thus a red brick house may appear yellow in sunlight and purple in shade. If, through timidity or deficiency of knowledge of these effects, and also, perhaps, from the want of a good study from nature to help him, he should begin by painting the whole house red, and afterwards put in the shadow, he would lose all the purity and effect of the contrast. Again, if, according to the old style, his anxiety to secure the light and shade caused him to put it in with Indian ink, a similar result would be the consequence.

The effect of drawings prepared with these neutral grays is the same with that of coloured prints or lithographs; they are imperfect in principle, and, of course, as pictures they have a feeble result. Where, however, the desire is to give a general harmonious effect without aiming at strong contrasts, such as the tone over the distance or middle distance of a subject, the author does not advise leaving the paper pure, in order to try for these strong con-

trasts; he would rather secure breadth, with a sufficient attention to the general tone, with the first broad washes, and afterwards trust to the addition of the complementary colours in the shadows. As an example of the use of studying these effects from nature, he adds one of his notes on this point:

December: Passing in the train to Rugby.—"A tolerably clear sunny morning; the sky in some degree crossed with filmy clouds; a decided change of colour near the horizon, where a warm grayish vapour arose. The light being on the right hand as I looked back, cast the shadow of the steam in a line parallel to the railway; as it passed over the country, I had an opportunity of testing the truth of the observation, that the shadows should be put in at once of the accidental colour to the colour in light, without reference to the local or natural colour of objects. Remark the shadow of the steam, which, in gushes or rounded masses in perspective, passes, now over green meadows or rich brown ploughed fields, now over russet haystacks or the seared leaves still remaining on the oak. Does it completely hide the colour of these objects? By no means. We can most easily distinguish, not only the green of the meadows, or the brown of the ploughed land, but even the variations in colour caused by the fallen leaves on the grass, or the cooler greyish blue of the little plashes of water in the furrows of the arable land. This local colour must be represented. We have to determine, therefore, whether the shadow shall be painted regardless of all these variations, or whether a portion of the rich local tones should be put in with the first generalising tints, and afterwards the shadow added with a clear transparent tone of the right accidental colour: but notice, although the sunlight is rather warm, or not white light, it is not by any means a rich yellow, and the shadow is not a very distinct purple, but approaches a neutral gray, in the same degree that the light approaches a cool yellow. We have thus more of the sober opposition of black and white than of yellow and purple; and it is worthy of remark, that these sobered contrasts are more likely to be observed at this time of the year than richer and more striking effects. A general tendency to haze, and that of a cool nature, has doubtless contributed to moderate these contrasts. The colours, as well as the lights and shadows, are equal in intensity, consequently there is no opportunity for the more striking effects to be produced."

It now becomes necessary to say a few words on the balance of colour; a point in every case interesting to the student, and one difficult to determine by stating any definite proportions. Probably the first lesson he will learn is, that certain quantities of one colour balance certain quantities of another of equal intensity. All this it may be well to know; but if no more is learned, how little use would this prove to any artist, more particularly to a landscape-painter! Let the student call to mind any fine land-

scape in which he could map out and proportion the exact quantities of pure colour balanced by any other colours; or, if he will, let him take the diagram in Fig. 1, Plate 3, and see whether, when he has obtained certain portions of the primitive colours, he can cut them into pieces and produce an artistic effect with them. Undoubtedly, in experimenting with the coloured rays of light, he may unite them, and compose white light: but uniting these representatives of colour will only produce blackness; or when placed side by side, with the strictest attention to proportion, they will only remind one of a kaleidoscope pattern or a harlequin's jacket. There are many other things necessary to produce pictorial colouring. Variations of colour are as numerous as those of form; and as no two or three figures are placed in all compositions, even though they may be the foundation of all forms in geometry,—such as the right line, the square, the circle,—but are infinitely varied by broken lines, curves, ovals, &c., so, in colour, the three primitives are equally varied, blended, harmonised, and opposed under every conceivable effect of air, light, shade, &c.

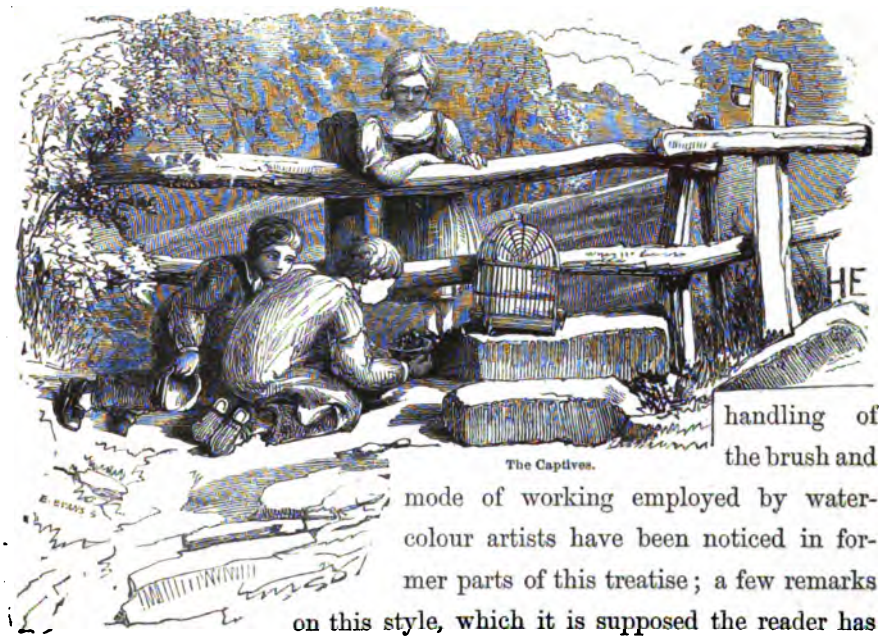
It has already been observed, in Chapter I. Section III., that although the three primitive colours, however nicely proportioned in size and intensity, do not produce a harmony that the eye loves to dwell on as a picture, yet, if we multiply the contrasts by repeating them in small quantities, observing the relative proportions, and add white and black, giving to the whole sufficient distance to produce aerial perspective, we shall have an harmonious effect. It was doubtless by these means the Egyptians produced so much effect in their temples with so few colours. Passing from these early and perhaps crude colourists to the colouring of the Moors, as shown in the Alhambra, and exquisitely reproduced by Owen Jones at the Crystal Palace, a most beautiful effect is afforded by the skilful adjustment not only of the three primitive colours, but also of light, shade, and cast shadow; and the way in which this is effected is very extraordinary—the scrolls, ornaments, and designs which cover the whole wall are not only coloured, but are raised in relief about an inch; the return sides being painted in red, the upper surface having the other two primitives only, combined with white, the shade and cast shadow supplying the dark or black. We have thus the three primitives with white and shadow in ever-varying quantities, illuminated

with the warm southern sun; and having abundance of reflection of green from the garden and sparkling water, it must have presented a most harmonious blending of colours.

In addition it may be remarked, colour is equally suited to balance form or light and shade—one quality or power may agreeably balance another; and the student should be reminded that many of the observations made in Chapter III. Section II., on "Light and Shade," apply as well here. Pure and strong colours, in small portions compared to the rest of the landscape, must be kept to the foreground; for the mists and vapours contained in the air, combined with the different colours and hues given by reflections, refractions, &c., prevent them from being seen in any degree of purity in the distance. When we add to these the effect of light of a predominant colour, which completely changes all local colour, we see how difficult it is to prescribe any certain proportions of each colour, without entering into the details of depth of tone, light, shade, &c.

In concluding these notes on Contrasts, it will be evident to the student that the power of producing a powerful and harmonious effect will depend, not so much on the strength of the individual colours, as the relative positions they occupy in his composition: thus great brilliancy may be the result of a skilful combination of the tertiary hues, while nothing but heaviness and dullness might show itself with all the primary colours placed in a pure state on his canvas; or, if he steered clear of this Scylla, he might fall into the Charybdis of violent and incongruous discords. To avoid this, let him give the subject steady thought and careful attention, and follow it up with a close study of nature under the most favourable aspects. Proceeding thus, we doubt not he will be amply repaid by the correctness and pleasing effect in his pictures.

SECTION XII.—CONCLUSION,



The Captives.

handling of the brush and mode of working employed by water-colour artists have been noticed in former parts of this treatise; a few remarks on this style, which it is supposed the reader has chosen in order to carry out his views of nature and art, may be here added. The mode once adopted, the student will naturally feel desirous of using the means at his disposal with all the power of which they are capable. With this view, he should, in addition to the most determined perseverance in overcoming every obstacle, call to his aid the knowledge and experience of those who have already achieved success in a similar career, carefully guarding against that feeling of impatience which, spurning steady work, seeks some rapid and, as it were, sleight-of-hand way of attaining its object. Above all, he must constantly bear in mind that water-colour painting is *par excellence* a mode of using *transparent* pigments on a white ground; consequently any attempt to engraft the beauties or capabilities of other styles totally different in this important quality cannot end otherwise than in a loss of the chief beauty of water-colours. In like manner, some sculptors, not content with the refined

beauty and semi-transparent delicacy of Carrara marble, and sighing for the attractions of colour, have sacrificed these qualities by covering their statues with a coating of white, in order to superadd colour. Again, some oil-painters, under the idea of obtaining an aerial effect, have mixed their pigments for the sky and distance with turpentine, or other vehicles so volatile that the paint peels off from want of cohesion. In the practice of water-colours likewise, modes unsuitable to the general style have been adopted in the hope of gaining power and rapidity ; among these, the immoderate use of an opaque body-white over the whole drawing, in the shadows as well as on the lights, is the most objectionable. Instead of attempting to combine these two incompatible styles, causing, on the one hand, the loss of the power of glazing, and on the other, the sacrifice of all the beauty of transmitted light, it would be better to change the vehicle and materials altogether, and, when using opaque pigments, to select those already prepared in oil, which admit of great strength, depth, and transparent glazings. The employment of opaque colours with water, size, or gum as vehicles, although undesirable in some instances, is admirably adapted for panoramas or large scenes, where the distance from which the painting is viewed gives transparency, and where the effect is aided by modified lights thrown upon the scenes from different directions; but when carried throughout a water-colour drawing, it only substitutes the opacity of an absorbent, and often impure white ground, for well-sized white paper. Let it not be supposed that the author considers it wrong to use any power belonging to another style which can be advantageously introduced, or wishes to decry a style by saying it is illegitimate; on the contrary, he thinks an opaque white like Chinese white gives the extreme lights on such objects as leaves, water, &c., with great effect, and also is now and then of great assistance in scumbling over the distance. Lest he should be considered prejudiced in these views, he begs to add the opinion of Mr. Twining; a gentleman who, as an amateur, has studied the art both philosophically and practically, and whose judgment therefore may be accepted as unbiassed. In his *Philosophy of Painting*, he says: "It would be almost humiliating to art to mention some of the absurd and preposterous means which have been resorted to for what is sometimes considered an effective style of imitation. The trickery

or the novelty of the process wins approval, in a degree which is proportionate to the extravagance of the means employed rather than to the worth or merit of the result; nevertheless, so easily is the pleasure which is derived from astonishment confounded with that which we owe to merit, that our admiration is not withheld. There is at times but a very slight distinction between the expressions 'How beautiful!' and 'How extraordinary!' however widely the conditions which may call for the one may differ on other occasions from those which give rise to the other. Thus it is that in proportion as the style becomes lower, the difficulties to be contended with diminish; till at last, a child who has an unusual share of daring might almost seem a prodigy, from the facility with which he produces surprising results.

"The highest styles of art are those in which no assistance is borrowed from preparation, either in the materials or in the method employed, from regularity in the mechanical process, or from trickery in the manual part of the labour, and in which no colours are extended or concentrated in order that some effect pleasing to the eye may be substituted for the truths of nature. The styles in which success is most uncertain, as it is most creditable, are those in which the colours used have the degree of brilliancy, transparency, or substance, which is required in order to convey the most truthful impression of the subject, and where the forcibleness of the imitation depends consequently on substantial and positive workmanship, and not on the fascination of the beholder. In this respect, oil-painting seems to claim the preference over other styles; but water-colours, independently of other merits which oils do not possess, come very near to it when, by successive colouring and glazing, the white of the paper has entirely disappeared under a rich and transparent body of colour."

Mannerism in art may be described as any peculiar way of treating or handling pictorial subjects, the work being executed in one unvaried manner, arising doubtless either from the limited ideas of the artist, or a want of facility or variety in the way in which he embodies them. This defect, from whatever cause it may arise, the student should endeavour to avoid in the early part of his practice: in doing this he may derive assistance from studying with attention paintings by the best masters; but while continually

comparing his works with theirs, he must always recollect that nature is the fountain-head from which all must draw their inspiration.

There is a material difference in the manner in which artists carry out their ideas of nature; some possess powers of one kind, others excel in qualities of a different description. One who has the valuable power of grasping the main features of a scene, and retaining them in his memory until he can embody them, may not possess the refinement or delicacy in the execution required to work up his picture to the full effect that may be desired; in which case, when seen close at hand, it will always present an unfinished appearance. Another, paying undue attention to the execution of the portion which immediately engages his pencil, may lose entirely or deteriorate the higher qualities of effect; he may not himself perceive this deficiency, but a judicious critic coming in with a fresh eye would at once observe it, because, without predilection for any particular part, his first thought would be to look for the more important qualities. There should be a variety in treating subjects as well as a varied manner in producing effects; otherwise peculiarities will arise which will increase year by year, until the productions of the artist can be distinguished in the galleries at a glance, and he is justly stigmatised as a mannerist.

In order to gain, therefore, the greatest amount of improvement from the examination of the works of others, the student should not copy the productions of any one artist for any length of time, but examine in what qualities they each excel; some may show much vigour and facility in pencilling, others may succeed in rich and harmonious colouring, while a few may possess the rare talent of embodying fine effects with the above qualities. When by these studies an enlarged idea of art is obtained, he will not express his own views of nature in the style of any other master, but will have formed a manner of his own, derived from the training he has thus received combined with his constant comparisons of nature; and the more strength and vigour he possesses, the more will his mode of treatment differ from all who have preceded him.

A dry cold manner, when carried to the extreme, is even more objectionable in colour than in outline; in the latter it may be excused in the attempts of the beginner, from its preventing a looseness and indecision, so

objectionable even when sketching from nature; but in colour it only produces harshness and crudeness, joined to feebleness in the effect. It is generally the result of a want of boldness in laying on the colour in sufficient quantity; the opposite extreme arises from using too much, and so loading on the colour until all becomes heavy and opaque. Experience in the use of his materials, added to a knowledge of their effect, will prevent the young student from falling into these errors.

If the student has been well instructed in the elementary parts of art, his hand trained to move with freedom and grace in all directions, whether holding the pencil or brush, and if at the same time he is aware of the power belonging to both instruments, his mode of execution will be bold and rapid, and, from an appearance of ease in the execution, convey pleasure to the spectator. Still his chief aim should be so to use this power that, without drawing attention to itself,—as if the *touches* or *strokes* of themselves were beautiful, or as if *they* showed great boldness and facility, and without any apparent effort,—he may give to each portion of his subject that quality which it ought to possess: thus trees, grass, rocks, water, or clouds will all be distinguished with facility, each being at once recognised, not only by its colour, but by the other qualities belonging to it,—such as hardness combined with roughness of texture in rocks, looseness and leafiness in foliage, liquid transparency joined to the appearance of motion in water, while clouds will give the idea of vapours floating in the air. All parts of his work, in fact, should have their peculiar properties or character imparted to them, causing them to hold the same position in the picture which they do in nature, and thereby giving the additional charm of a graceful execution.

It now but remains for me to conclude; indeed, I am warned by the great increase of plates and matter in this edition that it is possible to be too diffuse, too elaborate. Enough, I hope, has been explained of the principles on which the practice has been founded, and a sufficient number of examples given of that mode of painting in water-colours which has hitherto been adopted by the British school. During a close study of the various sections treating of the different parts of a picture, there is some

danger lest the earnest student should forget what is its real object. This dwelling on the execution or handling, on foregrounds, the washing-in of skies, the stippling, the hatching, will never enable him to make pictures, if the main incident or focus of interest be forgotten or obscured. And here lies a great difficulty; for this important point once lost sight of, the most exquisite drawing, colouring, and execution become only obtrusive: it is often for this reason that pictures painted entirely from nature are not the most successful. Very few persons have the power of keeping the parts which they with such minute care and attention are painting in their relative position; and still fewer like to pass the brush over and sacrifice details or colour, which have been gained by great exertions, when it is discovered they are not required in the picture: yet all should recollect that it is possible for the hand to be exceedingly busy and skilful, whilst the mind is altogether dormant. I trust, however, that while with much anxiety I have endeavoured to explain to my readers the practice of water-colour painting, I have yet made even more evident the great and high principles which should guide that practice.

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THE END.

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